

**Chignik Management Area Commercial Salmon
Fisheries and Stock Status Report to the Alaska Board
of Fisheries, January 2008**

by

Mark A. Stichert

December 2007

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

Weights and measures (metric)		General		Measures (fisheries)	
centimeter	cm	Alaska Department of		fork length	FL
deciliter	dL	Fish and Game	ADF&G	mid-eye-to-fork	MEF
gram	g	Alaska Administrative		mid-eye-to-tail-fork	METF
hectare	ha	Code	AAC	standard length	SL
kilogram	kg	all commonly accepted		total length	TL
kilometer	km	abbreviations	e.g., Mr., Mrs., AM, PM, etc.		
liter	L			Mathematics, statistics	
meter	m	all commonly accepted		<i>all standard mathematical</i>	
milliliter	mL	professional titles	e.g., Dr., Ph.D., R.N., etc.	<i>signs, symbols and</i>	
millimeter	mm			<i>abbreviations</i>	
		at	@	alternate hypothesis	H _A
Weights and measures (English)		compass directions:		base of natural logarithm	<i>e</i>
cubic feet per second	ft ³ /s	east	E	catch per unit effort	CPUE
foot	ft	north	N	coefficient of variation	CV
gallon	gal	south	S	common test statistics	(F, t, χ^2 , etc.)
inch	in	west	W	confidence interval	CI
mile	mi	copyright	©	correlation coefficient	
nautical mile	nmi	corporate suffixes:		(multiple)	R
ounce	oz	Company	Co.	correlation coefficient	
pound	lb	Corporation	Corp.	(simple)	r
quart	qt	Incorporated	Inc.	covariance	cov
yard	yd	Limited	Ltd.	degree (angular)	°
		District of Columbia	D.C.	degrees of freedom	df
Time and temperature		et alii (and others)	et al.	expected value	<i>E</i>
day	d	et cetera (and so forth)	etc.	greater than	>
degrees Celsius	°C	exempli gratia		greater than or equal to	≥
degrees Fahrenheit	°F	(for example)	e.g.	harvest per unit effort	HPUE
degrees kelvin	K	Federal Information		less than	<
hour	h	Code	FIC	less than or equal to	≤
minute	min	id est (that is)	i.e.	logarithm (natural)	ln
second	s	latitude or longitude	lat. or long.	logarithm (base 10)	log
		monetary symbols		logarithm (specify base)	log ₂ , etc.
		(U.S.)	\$, ¢	minute (angular)	'
Physics and chemistry		months (tables and		not significant	NS
all atomic symbols		figures): first three		null hypothesis	H ₀
alternating current	AC	letters	Jan,...,Dec	percent	%
ampere	A	registered trademark	®	probability	P
calorie	cal	trademark	™	probability of a type I error	
direct current	DC	United States		(rejection of the null	
hertz	Hz	(adjective)	U.S.	hypothesis when true)	α
horsepower	hp	United States of		probability of a type II error	
pH	pH	America (noun)	USA	(acceptance of the null	
hydrogen ion activity		U.S.C.	United States	hypothesis when false)	β
(negative log of)			Code	second (angular)	"
parts per million	ppm	U.S. state	use two-letter	standard deviation	SD
parts per thousand	ppt, ‰		abbreviations	standard error	SE
volts	V		(e.g., AK, WA)	variance	
watts	W			population	Var
				sample	var

FISHERY MANAGEMENT REPORT NO. 07-63

**CHIGNIK MANAGEMENT AREA COMMERCIAL SALMON FISHERIES
AND STOCK STATUS REPORT TO THE ALASKA BOARD OF
FISHERIES, JANUARY 2008**

by

Mark A. Stichert
Division of Commercial Fisheries

Alaska Department of Fish and Game
Division of Sport Fish, Research and Technical Services
333 Raspberry Road, Anchorage, Alaska 99518-1599

December 2007

The Division of Sport Fish Fishery Manuscript series was established in 1987 for the publication of technically-oriented results of several years' work undertaken on a project to address common objectives, provide an overview of work undertaken through multiple projects to address specific research or management goal(s), or new and/or highly technical methods. Since 2004, the Division of Commercial Fisheries has also used the Fishery Manuscripts series. Fishery Manuscripts are intended for fishery and other technical professionals. Fishery Manuscripts are available through the Alaska State Library and on the Internet: <http://www.sf.adfg.state.ak.us/statewide/divreports/html/intersearch.cfm> This publication has undergone editorial and peer review.

*Mark A. Stichert,
Alaska Department of Fish and Game, Division of Commercial Fisheries,
211 Mission Road, Kodiak, AK 99615, USA*

This document should be cited as:

Stichert, M. A. 2007. Chignik management area commercial salmon fisheries and stock status report to the Alaska Board of Fisheries, January 2008. Alaska Department of Fish and Game, Fishery Management Report No.07-63, Anchorage.

The Alaska Department of Fish and Game (ADF&G) administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act (ADA) of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility please write:

ADF&G ADA Coordinator, P.O. Box 115526, Juneau AK 99811-5526

U.S. Fish and Wildlife Service, 4040 N. Fairfax Drive, Suite 300 Webb, Arlington VA 22203

Office of Equal Opportunity, U.S. Department of the Interior, Washington DC 20240

The department's ADA Coordinator can be reached via phone at the following numbers:

(VOICE) 907-465-6077, (Statewide Telecommunication Device for the Deaf) 1-800-478-3648, (Juneau TDD) 907-465-3646, or (FAX) 907-465-6078

For information on alternative formats and questions on this publication, please contact:

ADF&G, Sport Fish Division, Research and Technical Services, 333 Raspberry Road, Anchorage AK 99518 (907)267-2375.

TABLE OF CONTENTS

	Page
LIST OF TABLES.....	iii
LIST OF FIGURES	iii
LIST OF APPENDICES	iv
ABSTRACT	1
INTRODUCTION.....	1
SALMON MANAGEMENT PLANS	2
Chignik Salmon Management Plan	2
Cape Igvak Salmon Management Plan.....	2
Southeastern District Mainland Salmon Management Plan	2
Chignik Area Cooperative Purse Seine Salmon Management Plan.....	3
COMMERCIAL SALMON HARVEST STRATEGY	3
Chignik Bay and Central Districts Commercial Salmon Fishery	3
Eastern District Commercial Salmon Fishery.....	4
Western and Perryville Districts Commercial Salmon Fishery	4
SALMON ESCAPEMENT BY SPECIES	4
Salmon Escapement Monitoring.....	4
Stock Separation Techniques.....	4
Chinook Salmon	5
Sockeye Salmon.....	5
Coho Salmon	6
Pink Salmon.....	6
Chum Salmon	6
SALMON HARVEST BY SPECIES	7
Harvest Reporting.....	7
Chinook Salmon	7
Sockeye Salmon	7
Coho Salmon	8
Pink Salmon	8
Chum Salmon.....	8
ECONOMIC VALUE	8
2006 AND 2007 SEASON SUMMARIES	8
CHIGNIK AREA SALMON SUBSISTENCE FISHERIES.....	9
COMMERCIAL HERRING	10
Herring Management Overview	10

TABLE OF CONTENTS, (Continued)

	Page
Historical Data.....	10
2008 HARVEST PROJECTIONS.....	10
REFERENCES CITED	10
TABLES AND FIGURES.....	13
APPENDIX A. COMMERCIAL SALMON FISHING EFFORT AND HARVEST, BY DAY, IN THE CHIGNIK MANAGEMENT AREA, 2006.....	45
APPENDIX B. COMMERCIAL SALMON FISHING EFFORT AND HARVEST, BY DAY, IN THE CHIGNIK MANAGEMENT AREA, 2007.....	49
APPENDIX C: FORECAST AND ACTUAL RUNS	53

LIST OF TABLES

Table	Page
1. Chignik River sockeye salmon interim escapement objectives.....	14
2. Estimated Chignik River Chinook, coho, pink, and chum salmon and Dolly Varden escapement through the Chignik weir, 1970 through 2007.	15
3. Total Chignik River sockeye salmon escapement and escapement goals, based on postseason analysis, by run, 1970 through 2007.	16
4. Estimated pink salmon escapement and management objectives in the Chignik Management Area, by district and year, 1970 through 2007.	17
5. Estimated chum salmon escapement and objectives in the Chignik Management Area, by district and year, 1970 through 2007.	19
6. Chignik Management Area Chinook salmon harvest (including home pack and the department's test fishery catches), by district and year, 1970 through 2007.	20
7. Chignik Management Area sockeye salmon harvest (including home pack and the department's test fishery catches), by district and year, 1970 through 2007.	21
8. Total harvest of sockeye salmon considered by regulation to be Chignik-bound in the Chignik, Cape Igvak, and Southeastern District Mainland commercial salmon fisheries, 1978 through 2007.	22
9. Chignik sockeye salmon escapement, total harvest considered Chignik-bound, and total run, 1970 through 2007.	24
10. Harvest of sockeye salmon considered by regulation to be Chignik-bound in the Chignik, Cape Igvak, and Southeastern District Mainland commercial salmon fisheries from June 1 through July 25, 1978 through 2007.	25
11. Chignik Management Area coho salmon harvest (including home pack and the department's test fishery catches), by district and year, 1970 through 2007.	27
12. Chignik Management Area pink salmon harvest (including home pack and the department's test fishery catches), by district and year, 1970 through 2007.	28
13. Chignik Management Area chum salmon harvest (including home pack and the department's test fishery catches), by district and year, 1970 through 2007.	29
14. Value of the commercial salmon harvest, by species, and average value per active permit, in dollars, in the Chignik Management Area, 1970 through 2007.	30
15. Total commercial salmon harvests (including home pack and the department's test fishery harvests) from the Chignik Management Area by species and year, 1970 through 2007.	32
16. Number of subsistence permits issued and returned and estimated salmon subsistence harvest, by species and year, 1980 through 2006.	33

LIST OF FIGURES

Figure	Page
1. Map of the Alaska Peninsula illustrating the relative locations of the Chignik, Kodiak, and Alaska Peninsula and Aleutians Islands Management Areas	34
2. Map of the Chignik Management Area illustrating district and section boundaries and statistical areas.	35
3. Chignik River Chinook salmon escapement through the Chignik weir by year, 1970 through 2007, as compared to the 2007 biological escapement goal (BEG) range.....	36
4. Chignik River sockeye salmon early-run, late-run, and combined run escapements 1970 through 2007, compared to 2007 sustainable escapement goal (SEG) range.	37
5. Chignik-bound sockeye salmon total harvest, 1970 through 2007.....	38
6. Chignik-bound early-run sockeye salmon harvest, 1970 through 2007.	39
7. Chignik-bound late-run sockeye salmon harvest, 1970 through 2007.	40
8. Average exvessel value (\$) per permit (bars) and total permits (line) fished by year 1970 through 2007.	41
9. Average harvest composition for salmon delivered in the CMA, by species.	42
10. Representation of days open to commercial salmon fishing, by district and month, 2006.....	43
11. Representation of days open to commercial salmon fishing, by district and month, 2007.....	44

LIST OF APPENDICES

Appendix	Page
A1. Commercial salmon fishing effort and harvest (including home pack but not including the department's test fishery harvest), by day in the Chignik Management Area, 2006.....	46
B1. Commercial salmon fishing effort and harvest (including home pack but not including the department's test fishery harvest), by day in the Chignik Management Area, 2007.....	50
C1. Chignik sockeye salmon forecasts and actual runs, by run and year, 1993 through 2007.....	54

ABSTRACT

The Chignik Management Area (CMA; Area L) is located in the northwest Gulf of Alaska between Kilokak Rocks and Kupreanof Point on the South Alaska Peninsula. All five species of Pacific salmon were commercially harvested in the CMA: Chinook *O. tshawytscha*, sockeye *O. nerka*, coho *O. kisutch*, pink *O. gorbuscha*, and chum *O. keta* salmon. All CMA salmon resources are managed by emergency order (EO) based on inseason evaluation of local salmon stocks. A single CMA salmon management plan is in effect from June 1 through October 31 annually. Chignik-bound sockeye salmon are also allocated to Kodiak Management Area (Area K) and South Alaska Peninsula (Area M) fisheries. The Chignik Area cooperative management plan was repealed prior to the start of the 2006 salmon season. Purse seine and hand purse seine are the only legal commercial gear types in the Chignik Area.

Two distinct runs (early and late run) of sockeye salmon enter the Chignik River. The 2006 and 2007 sockeye salmon escapements either met or surpassed the established sustainable escapement goals (SEG) for both runs and were similar to recent averages. The annual CMA sockeye salmon harvests in 2006 and 2007 were 902,709 and 834,547 fish, respectively. Sockeye salmon harvests for both years were below the 5-year (938,868), 10-year (1,320,267), and 20-year (1,409,684) average harvests. Approximately 50 percent of all permits holders eligible to fish participated in the 2006 and 2007 fisheries.

Key words: Chignik Management Area (CMA), Chinook salmon, *Oncorhynchus tshawytscha*, sockeye salmon *O. nerka*, coho salmon *O. kisutch*, pink salmon *O. gorbuscha*, chum salmon *O. keta*, herring, *Clupea pallasii*, Alaska Board of Fisheries (BOF), commercial fisheries management, harvest statistics, escapement statistics, exvessel value.

INTRODUCTION

The Alaska Department of Fish and Game (ADF&G) manages all commercial salmon *Oncorhynchus* sp. and Pacific herring *Clupea pallasii* fisheries within the Chignik Management Area (CMA; Area L). The CMA encompasses all coastal waters and inland drainages of the northwest Gulf of Alaska between Kilokak Rocks and Kupreanof Point (Figure 1). For management purposes, these waters are divided from east to west into five fishing districts: Eastern, Central, Chignik Bay, Western, and Perryville districts. Each district is further broken down into sections and statistical reporting areas (Figure 2).

Five species of Pacific salmon are commercially harvested in the CMA: Chinook *Oncorhynchus tshawytscha*, sockeye *O. nerka*, coho *O. kisutch*, pink *O. gorbuscha*, and chum *O. keta* salmon. The ADF&G manages all CMA commercial salmon resources by emergency order (EO) based on inseason evaluation of local stock abundance and escapement objectives. Sockeye salmon are the primary species targeted and the most important commercial and subsistence salmon species in the CMA. The majority of fishing effort is concentrated on sockeye salmon returning to the Chignik River watershed. Commercial salmon fishing is the economic mainstay for five villages: Chignik Bay (Anchorage Bay), Chignik Lagoon, Chignik Lake, Perryville, and Ivanof Bay (Figure 1). Most commercially caught salmon are delivered to a single shore based processor located in Anchorage Bay.

This report describes the CMA and provides an overview of its salmon resources. Specifically, this report describes the management plans and harvest strategies that influence CMA salmon fisheries as well as provides a summary of salmon escapement and commercial harvests with emphasis on the two years (2006 and 2007) since the Board of Fisheries (BOF) last addressed CMA fisheries. This report additionally provides a brief summary of CMA salmon subsistence and herring fisheries and the 2008 salmon harvest projections. Most information in this report has been verified against the Westward Region electronic harvest and escapement databases, which contain historical data from 1970 to the present.

SALMON MANAGEMENT PLANS

CMA commercial salmon fisheries are managed based on a single management plan, the Chignik Salmon Management Plan (5 AAC 15.357). Sockeye salmon bound for the Chignik River watershed are also allocated under two additional management plans outside of the CMA: the Cape Igvak Salmon Management Plan (5 AAC 18.360) in the Kodiak Management Area (Area K), and the Southeastern District Mainland (SEDM) Salmon Management Plan (5 AAC 09.360) in the Alaska Peninsula Management Area (Area M). The Chignik Area Cooperative Purse Seine Salmon Fishery Management Plan (5 AAC 15.359) was repealed prior to the start of the 2006 commercial salmon season.

CHIGNIK SALMON MANAGEMENT PLAN

The Chignik Salmon Management Plan (5 AAC 15.357) was originally adopted in 1999. The goal of this plan is to allow traditional salmon fisheries in the CMA while achieving the sustainable escapement goals (SEGs) for both early-run (Black Lake), and late-run (Chignik Lake) sockeye salmon. Purse seines and hand purse seines are the only legal commercial salmon fishing gear within the CMA. Legal seine gear can range from 100 to 125 fathoms in length in the Chignik Bay District and from 100 to 225 fathoms in length in all other districts. To assist management efforts, the management plan is organized by district or groups of districts: the Chignik Bay and Central districts, the Eastern District, and the Western and Perryville districts.

CAPE IGVAK SALMON MANAGEMENT PLAN

CMA salmon fisheries are also influenced by the Cape Igvak Salmon Management Plan (5 AAC 18.360). Cape Igvak is the westernmost component of the Kodiak Management Area (Area K), located directly to the east of the CMA (Figure 1). If the harvestable surplus of sockeye salmon in the CMA is above or expected to be above certain thresholds (5 AAC 18.360 (a-c)), then 15 percent of the total Chignik sockeye salmon harvest (including sockeye salmon caught at Cape Igvak and within certain portions of SEDM) is allocated to Area K fishermen. Based on this management plan, 90 percent of the sockeye salmon harvested within the Cape Igvak Section are considered to be Chignik-bound. This management plan is in effect from the beginning of the fishing season through July 25. After July 25, there are no allocative ties between the CMA and Area K.

SOUTHEASTERN DISTRICT MAINLAND SALMON MANAGEMENT PLAN

Certain sockeye salmon harvested by Area M fishermen under the Southeastern District Mainland (SEDM) Salmon Management Plan (5 AAC 09.360) are also allocatively considered Chignik-bound. The SEDM is composed of a group of sections at the eastern margin of Area M, located directly southwest of the CMA (Figure 1). Under this plan, if the harvestable surplus of sockeye salmon in the CMA is expected to exceed certain thresholds (5 AAC 09.360 (a-g)), then 7.6 percent of the total CMA sockeye salmon harvest is allocated to SEDM fishermen. Based on this management plan, 80 percent of the sockeye salmon harvested within certain SEDM sections during specific times are considered Chignik-bound. This management plan is in effect from the beginning of the fishing season through July 25. After July 25, there are no allocative ties between the CMA and Area M.

CHIGNIK AREA COOPERATIVE PURSE SEINE SALMON MANAGEMENT PLAN

The Chignik Area Cooperative Purse Seine Salmon Fishery Management Plan was legally scrutinized since its adoption by the Alaska Board of Fisheries (BOF) in January 2002. Once in regulation, the BOF recognized the potential for conflict under this management strategy and reviewed the cooperative management plan after the 2002, 2003, 2004, and 2005 commercial salmon seasons. At these meetings, commercial, subsistence, and other stakeholder concerns were addressed by the board through regulatory changes and commissioner's permits.

Prior to the start of the fourth cooperative commercial salmon season (March 2005), the Alaska Supreme Court ruled the original regulation (5 AAC 15.359) contradicted the intent of the Limited Entry Act and repealed the cooperative management plan. In May of that year, the BOF re-established the cooperative management plan by emergency regulation (5 AAC 15.358) and required all active cooperative members to physically participate in the fishery to gain economic benefits. This action was subsequently challenged in the Anchorage Superior Court, where the trial court judge ruled the emergency regulation still violated the spirit and purposes of the Limited Entry Act, as described in the Alaska Supreme Court decision. However, the state appealed the Anchorage Superior Court decision to the Alaska Supreme Court and was granted a stay of decision until after completion of the 2005 season. Before the stay of decision expired, the BOF met again in November of 2005 and adopted the emergency management plan (with some modification) into regulation. This action was challenged in February of 2006, and the Alaska Supreme Court ruled the emergency regulation, and therefore the newly adopted cooperative management plan, was again, not legal and repealed the plan. Since the time of that decision, only a State of Alaska legislative action can establish a cooperative salmon fishery in the Chignik Management Area. No legislative action occurred prior to the start of the 2006 season and the CMA commercial salmon fishery has not been managed as a cooperative fishery since that time.

COMMERCIAL SALMON HARVEST STRATEGY

From June 1 through October 31, the ADF&G manages all CMA commercial salmon resources by emergency order (EO) based on inseason evaluation of local stock abundance and escapement objectives. Specifically, commercial salmon fisheries are structured around the seasonal abundance of salmon targeted in the CMA. Typically, early-run sockeye salmon are targeted from June through early July, late-run sockeye salmon from mid July through September, pink and chum salmon are targeted during July and August, and coho salmon are generally targeted during August and September.

CHIGNIK BAY AND CENTRAL DISTRICTS COMMERCIAL SALMON FISHERY

During June, commercial salmon fishing in the Chignik Bay and Central districts may occur when 20,000 sockeye salmon have escaped, or are expected to escape into the Chignik River. Subsequent openings during June occur when early-run sockeye salmon interim escapement objects are achieved or surpassed. During the period of transition from early-run to late-run sockeye salmon stocks (usually late June through mid July) fishing periods are established to target surplus early-run sockeye salmon without jeopardizing the late-run escapement objectives. From the end of the transition period until September 14, fishing periods are based on late-run sockeye salmon escapement objectives. Beginning September 15, fishing periods can be no

longer than 48-hours per week and are based on the estimated abundance of late-run sockeye salmon (ADF&G 2005).

EASTERN DISTRICT COMMERCIAL SALMON FISHERY

The Eastern District, by regulation, opens concurrently with the Chignik Bay and Central districts during June based on early-run sockeye salmon escapement objectives. During the transition period from early to late-run sockeye salmon, fishing periods are based on the abundance of both sockeye salmon runs and is often restricted until the department can evaluate the strength of late-run sockeye salmon run. After the transition period, commercial salmon fishing in the Eastern District is based on the department's evaluation of local pink, chum, and coho salmon as well as Chignik River-bound sockeye salmon (ADF&G 2005).

WESTERN AND PERRYVILLE DISTRICTS COMMERCIAL SALMON FISHERY

Beginning July 6, the Western and Perryville districts may open to commercial salmon fishing largely to target migrating pink and chum salmon. During the transition period (late June through mid-July) fishing periods in the Western and Perryville districts may be restricted until the department assesses late-run sockeye salmon run strength. From the end of the transition period until about August 20, management shifts to an escapement based strategy for local stocks of pink and chum salmon as well as late-run sockeye salmon. After August 20, fishing periods are based on local coho salmon runs as well as the department's evaluation of late-run sockeye salmon (ADF&G 2005).

SALMON ESCAPEMENT BY SPECIES

SALMON ESCAPEMENT MONITORING

The majority of CMA Chinook and sockeye salmon escapements are counted through the Chignik River weir. The weir is located approximately two miles east of the village of Chignik Lake (Figure 1), and operated from approximately June 1 to September 4 annually. Two gates in the weir allow for unrestricted passage of migrating salmon and underwater video equipment is used to count fish as they pass through the gates. The number of fish passing the weir, by species, are counted for the first 10 minutes of each hour, and then multiplied by six to obtain hourly escapement estimates. Hourly estimates are then summed to provide an estimate of daily fish passage. Since the weir is removed before the late run is complete, a post-weir sockeye salmon escapement estimate is produced using time series analysis. For management purposes, these results are included in the late-run total. Salmon escapements to other CMA streams are monitored and estimated via aerial survey at regular intervals throughout the salmon season.

STOCK SEPARATION TECHNIQUES

Two distinct sockeye salmon runs (an early and late run) enter the Chignik River watershed and temporally overlap during late June and early July. Prior to 2004, scale pattern analysis (SPA) was used to differentiate stock composition during this time, and the fishery was managed based on the results of this analysis. This program was discontinued prior to the 2004 season due to funding limitations. However, SPA found that, on average, the number of early-run sockeye salmon that passed the Chignik River weir after July 4 was approximately equal to the number of late-run sockeye salmon that passed the weir prior to July 4. CMA salmon fisheries are managed based on this date such that through July 4, fishing periods were based on achieving interim

early-run escapement objectives and beginning July 5, fishing periods were based on achieving interim late-run escapement objectives (Table 1).

Chinook Salmon

The Chignik River is the only stream with substantial Chinook salmon production within the CMA and the only system with an established Chinook salmon escapement goal (1,300-2,700; Witteveen et al. 2005). Chinook salmon typically enter the Chignik River during mid-June, peak in mid-July, and the run is generally complete by late August. The 2006 Chignik weir escapement of 3,535 Chinook salmon exceeded the BEG range of 1,300 to 2,700 fish (Table 2; Figure 3). The 2007 estimated escapement of 2,000 Chinook salmon was within the BEG range of 1,300 to 2,700 fish. Escapements for both 2006 and 2007 were below the 5-year (2003-2007), 10-year (1998-2007), and 20-year (1988-2007) escapement averages (Table 2).

Sockeye Salmon

Chignik River sockeye salmon are evaluated using interim escapement objectives based on the established SEG ranges for early-run (350,000 to 400,000) and late-run (200,000 to 250,000) sockeye salmon (Witteveen et al. 2005). However, an additional 50,000 sockeye salmon (25,000 fish in August and 25,000 fish in September) are added to the late-run SEG to meet late-season subsistence needs. Thus, management decisions are based on a late-run sockeye salmon escapement objective range of 250,000 to 300,000 fish (Table 1).

The ADF&G targeted the lower bounds of the sockeye salmon escapement goals during the 2006 and 2007 seasons based on limnology data from 2000 through 2006 that suggested the forage base for sockeye salmon was depressed in Chignik Lake (Bouwens and Finkle 2003a,b; Finkle 2005; Finkle 2006a,b; Finkle and Bouwens 2001). The ADF&G first adopted this practice in 2002 to relieve grazing pressure on zooplankton in Chignik Lake to improve juvenile sockeye salmon production.

Early-run sockeye salmon typically enter the Chignik River during June and July and migrate upstream to spawn in the tributaries of Black Lake. Late-run sockeye salmon typically enter the Chignik River from July through October and migrate upstream to spawn in Chignik Lake tributaries. The 2006 total estimated Chignik River sockeye salmon escapement was 735,493 fish (Table 3). The 2007 total estimated Chignik River sockeye salmon escapement was 654,974 fish. Total escapements for both years met or exceeded the escapement objectives and were within the range of recent escapement averages (Figure 4).

The estimated 2006 early-run escapement was 366,497 sockeye salmon (Table 3). The estimated 2007 early-run escapement was 361,091 sockeye salmon. Early-run escapements for both 2006 and 2007 were within the early-run SEG range of 350,000 to 400,000 sockeye salmon and were slightly above the 5-year (2003-2007) escapement average but below the 10-year (1998-2007) and 20-year (1988-2007) average early-run escapements (Figure 4).

The estimated 2006 late-run escapement was 368,996 sockeye salmon (Table 3). The estimated 2007 late-run escapement was 293,883 sockeye salmon. Late-run sockeye salmon escapement during 2006 and 2007 either met or exceeded the late-run SEG range (200,000 to 250,000) and late-run interim escapement objectives (250,000 to 300,000; Figure 4). Late-run escapement for 2006 exceeded the 5-year (2003-2007), 10-year (1998-2007), and 20-year (1988-2007) average late-run escapements (Tables 1 and 3). Late-run escapements for 2007 were slightly above the 5-

year (2003-2007) average late-run escapement but below the 10-year (1998-2007) and 20-year (1988-2007) averages.

Sockeye salmon escapements were documented, via aerial survey, in low numbers (generally less than 5,000 fish) in several other CMA streams. Due to small run sizes and limited effort, escapement goals for these streams have not been established (Witteveen et al. 2005).

Coho Salmon

Coho salmon enter CMA drainages in mid-August and generally continue past November. Due to their late season run timing, coho salmon runs are still building when the weir is removed for the season. Consequently, Chignik River coho salmon counts are considered incomplete and documented escapements are often variable from year to year. The 2006 Chignik River estimated coho salmon escapement of 37,113 fish through September 4 (weir removed September 5) was the largest documented escapement on record (Table 2). The 2007 Chignik River coho salmon escapement estimate through September 3 (weir removed September 4) was 10,299 fish, which was below recent 5-year (2003-2007) and 10-year (1998-2007) averages (Table 2). Coho salmon escapements were monitored, via aerial survey in several other CMA streams. Due to incomplete escapement records and limited directed effort, escapement goals for coho salmon have not been established in the CMA (Witteveen et al. 2005).

Pink Salmon

Pink salmon typically enter CMA streams during late July and peak during mid-August. Overall, pink salmon escapements across the CMA appear stable and are characterized by large odd-year returns followed by smaller even-year returns. Notably, pink salmon escapements to the Chignik River have increased significantly in recent years; the 2006 estimated pink salmon escapement was 18,401 fish, which exceeded the 5-year (2003-2007) and 10-year (1998-2007) average escapements (Table 2). The 2007 estimated pink salmon escapement was 20,464 fish, which was the largest documented Chignik River pink salmon escapement on record (Table 2).

Escapements into other CMA streams were monitored via aerial survey, summed for each district, and compared to district management objectives and area-wide escapement goals (Witteveen et al. 2005). Despite uncharacteristically weak returns during 2006, the area-wide aggregate pink salmon BEG ranges have been met or exceeded every year since 1988 (Table 4).

Chum Salmon

A limited number of chum salmon return to the Chignik River, mainly in August (Table 2). The 2006 and 2007 Chignik River chum salmon escapements were 99 and 118 fish respectively, which were below recent 5-year (2003-2007) and 10-year (1998-2007) average escapements (Table 5).

Escapements into other CMA streams were monitored via aerial survey, summed for each district, and compared to district management objectives and the area-wide SEG for chum salmon (Witteveen et al. 2005). The current area-wide aggregate chum salmon SEG threshold has been exceeded every year since 1970 (Table 5).

SALMON HARVEST BY SPECIES

HARVEST REPORTING

For management and reporting purposes, CMA commercial salmon harvests are organized into four categories. The first category includes fish that were commercially harvested but retained for private use (home pack). The second category includes salmon that were harvested and sold as part of the ADF&G test fishery program. The third category includes salmon commercially harvested within the CMA. The final category includes sockeye salmon commercially harvested under the Cape Igvak and SEDM management plans. For allocative purposes, the BOF has determined that specific portions of these harvests were considered bound for the Chignik River. Subsistence and department test fishery harvests, and salmon retained as home pack are not included in the Cape Igvak and SEDM harvest allocations.

Chinook Salmon

Most Chinook salmon are harvested in the Chignik Bay and Central districts from late June through mid-July and are taken incidental to the sockeye salmon harvest (Table 6). Since 1988, Chinook salmon harvests have ranged from 19,515 fish in 1993 to 1,521 fish in 2002 although harvests have generally remained stable during this time period. Chinook salmon harvests during 2006 (2,256) and 2007 (1,773) were below the 5-year (2003-2007), 10-year (1998-2007), and 20-year (1988-2007) average harvests (Table 6).

Sockeye Salmon

The majority of CMA sockeye salmon harvest occurs in the Chignik Bay District where commercial fishers target salmon as they enter the Chignik River. However, cape fisheries in the Eastern, Central, and Western districts can yield substantial harvests (Table 7). The 20-year (1988-2007) average CMA sockeye salmon harvest was 1,409,684 fish. The 10-year (1998-2007) average CMA sockeye salmon harvest was 1,320,267 fish. The recent 5-year (2003-2007) average CMA sockeye salmon harvest was 938,868 fish. A total of 902,709 sockeye salmon were harvested in the CMA during 2006. A total of 834,547 sockeye salmon were harvested in the CMA during 2007 (Table 7).

The total Chignik-bound (including Cape Igvak and SEDM) sockeye salmon harvests for 2006 and 2007 were 1,006,553 fish and 887,074 fish respectively (Table 8; Figure 5). The Chignik-bound early-run sockeye salmon harvests during 2006 (436,028) and 2007 (267,805) were well below the 5-year (2003-2007) early-run average harvest of 636,355 fish (Table 9; Figure 6). The Chignik-bound late-run sockeye salmon harvests during 2006 (570,525) and 2007 (619,269) were above the 5-year (2003-2007) average harvest of 504,329 sockeye salmon (Table 9; Figure 7).

During 2006, an additional 103,844 sockeye salmon allocatively considered Chignik-bound were harvested during the SEDM and Cape Igvak fisheries (Table 10). The Chignik-bound component of the SEDM harvest was 62,010 fish and totaled 7.3 percent of the total Chignik-bound harvest (allocation 6.0 percent). The Chignik-bound portion of the Cape Igvak harvest was 41,834 fish and totaled 4.9 percent of the total Chignik-bound harvest (allocation 15.0 percent). The 2007 Chignik-bound portion of the Cape Igvak harvest was 52,527 fish and totaled 8.0 percent of the total Chignik-bound harvest. The SEDM was not opened for harvest of Chignik-bound sockeye salmon in 2007 based on inseason fishery performance data that suggested the CMA minimum harvest threshold of 600,000 sockeye salmon was not going to be achieved prior to the end of the allocation period (July 25; Table 10).

Coho Salmon

The majority of CMA coho salmon harvests occur in the Chignik Bay and Western districts during July and August. Coho salmon harvests have ranged from 370,420 fish in 1988 to 37 fish in 2004 (Table 11). A total of 39,221 coho salmon were harvested in 2006. A total of 73,277 coho salmon were harvested in 2007. The 2006 coho salmon harvest was below the 5-year (2003-2007), 10-year (1998-2007), and 20-year (1988-2007) average harvests. The 2007 coho salmon harvest was above the 5-year (2003-2007), but below the 10-year (1998-2007) and 20-year (1988-2007) average harvests (Table 11).

Pink Salmon

The majority of pink salmon harvests occur in the Western District although notable harvests also occur, during some years, in the Chignik Bay, Central, and Eastern districts (Table 12). CMA pink salmon harvest and effort levels largely reflect market conditions and the amount of fishing effort outside of the Chignik Bay District. During years with poor market conditions most pink salmon are taken incidental to sockeye salmon. Conversely, during years with positive market conditions, CMA fishers actively target pink salmon and those harvests can represent a significant portion of the total annual harvest. Pink salmon harvests have ranged from a high of 2,997,159 fish in 1988 to a low of 2,380 fish in 2004. A total of 383,574 pink salmon were harvested in 2006, which was below the 5-year (2003-2007), 10-year (1998-2007), and 20-year (1988-2007) average harvests. A total of 2,019,748 pink salmon were harvested in 2007, which was the third largest pink salmon harvest on record (Table 12).

Chum Salmon

The majority of chum salmon harvests occur in the Western District during July. Similar to pink salmon, most chum salmon are taken incidental to sockeye salmon and annual chum salmon harvest levels are influenced by market conditions. Chum salmon harvests have ranged from a high of 580,332 fish in 1981 to a low of 505 fish in 2004 (Table 13). A total of 61,630 chum salmon were harvested in 2006. A total of 78,553 chum salmon were harvested in 2007. The 2006 and 2007 chum salmon harvests were higher than the recent 5-year (2003-2007) harvest average, but below the 10-year (1998-2007), and 20-year (1988-2007) averages (Table 13).

ECONOMIC VALUE

The economic value of recent commercial CMA salmon fisheries has ranged from approximately \$28.0 million (\$275 thousand per active permit holder) in 1988 to about \$3.6 million (\$36 thousand per permit holder) in 2004 (Table 14; Figure 8). The value of the 2006 fishery was approximately \$5.0 million (\$105 thousand per active permit holder). The value of the 2007 fishery was approximately \$5.6 million (\$101 thousand per permit holder). The value of the 2006 and 2007 CMA salmon fisheries was similar to the 5-year (2003-2007) exvessel value average, but below the 10-year (1998-2007) and 20-year (1988-2007) averages. Historically, the approximately 90 percent of the total exvessel value is generated from the sale of sockeye salmon (Figure 9).

2006 AND 2007 SEASON SUMMARIES

The first 2006 CMA commercial fishing period occurred on June 13, and the last commercial fishing period ended on August 31 after which the local processor closed for the season.

Commercial salmon fishing periods occurred during a total of 67 days. The majority of fishing time and effort occurred in the Chignik Bay and Central districts (each open for 65 days), followed by the Eastern District (52 days), and Western District (45 days; Figure 10). Despite ample fishing time (33 days), there was no documented effort in the Perryville District in 2006. Out of 96 total permits, 49 permit holders participated in the 2006 commercial salmon fishery (Table 15).

During the 2006 fishery, 2,256 Chinook salmon, 902,709 sockeye salmon, 39,221 coho salmon, 383,547 pink salmon, and 61,630 chum salmon were harvested in the CMA for a total exvessel value of approximately \$5.0 million. A summary of 2006 commercial salmon effort and harvests, by date, is located in Appendix A.

The first 2007 CMA commercial fishing period occurred on June 15 and the last commercial fishing period ended on September 5 after which the local processor closed for the season. Commercial salmon fishing periods occurred during a total of 69 days. The majority of fishing time and effort occurred in the Chignik Bay and Central districts (each open for 69 days), followed by the Western District (54 days), Eastern District (17 days), and the Perryville District (37 days; Figure 11). Out of 92 total permits, 56 permits holder participated in the 2007 commercial salmon fishery (Table 15).

During the 2007 fishery, 1,773 Chinook salmon, 834,547 sockeye salmon, 73,277 coho salmon, 2,019,748 pink salmon, and 78,553 chum salmon were harvested in the CMA for a total exvessel value of approximately \$5.6 million. A summary of 2007 commercial salmon effort and harvest by date is located in Appendix B.

CHIGNIK AREA SALMON SUBSISTENCE FISHERIES

In recent years, subsistence users have expressed concerns about limited early-season subsistence fishing opportunities near traditional subsistence fishing grounds. In response, the department and BOF (November 2004) increased subsistence fishing opportunities by opening sections of the Chignik River previously closed to salmon subsistence fishing. Additionally, regulations restricting commercial permit holders from subsistence fishing during the commercial salmon season were relaxed via provisions of the subsistence permit. Beginning in 2005, the BOF adopted formal regulations that allowed commercial salmon fishing license holders to, with certain restrictions (5 AAC 01.485), harvest subsistence salmon during the commercial season.

The BOF also directed the department to manage the August and September commercial salmon fisheries to allow for an additional 50,000 sockeye salmon (25,000 during August and 25,000 during September) to escape into the Chignik River to provide additional late-season harvest opportunities.

In 2006, the ADF&G issued 113 subsistence fishing permits in the CMA (Table 16). Based on the 79 permits returned to the ADF&G Division of Subsistence, the estimated subsistence harvest totaled 11,186 salmon. This harvest was below recent 5-year (2003-2007) and 10-year (1998-2007) subsistence harvest averages (Table 16). Sockeye salmon comprised the vast majority of the 2006 subsistence harvest. The 2007 subsistence effort and harvest levels are not available at this time.

COMMERCIAL HERRING

HERRING MANAGEMENT OVERVIEW

Herring may be harvested in the CMA from April 15 through June 30 (sac roe season) and from August 15 through February 28 (food and bait season), although specific commercial herring fishing periods and areas are allowed only by emergency order (5 AAC 27.560). Herring may be taken only by purse seines not more than 1,000 meshes in depth and 100 fathoms in length (5 AAC 27.575).

CMA herring resources are managed as separate stocks based on a maximum exploitation rate of 20%, given a threshold biomass is available for harvest. Threshold biomass levels are determined after aerial survey estimates are conducted and potential effort levels are determined prior to the fishing season.

HISTORICAL DATA

Commercial herring harvests were not recorded in the CMA until 1980 (Nicholson et al. 1980). In years when fisheries occurred, herring harvests ranged from a minimum of 6 tons in 1996 to a maximum of 587 tons in 1980. Due to poor market conditions, there has not been a CMA commercial herring fishery or biomass assessment since 1996 (Stichert 2007).

2008 HARVEST PROJECTIONS

The 2008 CMA sockeye salmon forecast was not completed at the time of this publication. The projected sockeye salmon harvests by run, will be available at the January 2008 Chignik BOF meeting. Historical Chignik sockeye salmon forecast forecasts, as compared to the actual returns, are listed in Appendix C.

Projected harvests for Chinook, coho, and chum salmon are based on the 1998-2007 (10-year) average harvests. The pink salmon harvest projection is based on the previous ten even-year average harvests. The total projected 2008 salmon harvests (excluding sockeye salmon) for the Chignik Management Area includes: 2,500 Chinook salmon, 75,000 coho salmon, 738,000 pink salmon, and 86,000 chum salmon.

REFERENCES CITED

- Bouwens, K. A. and H. Finkle. 2003a. Chignik watershed ecological assessment project season report, 2001. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K03-10, Kodiak.
- Bouwens, K. A. and H. Finkle. 2003b. Chignik watershed ecological assessment project season report, 2002. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K03-58, Kodiak.
- Finkle, H. 2005. Chignik watershed ecological assessment project season report, 2003. Alaska Department of Fish and Game, Fishery Management Report No. 05-20, Anchorage.
- Finkle, H. 2006a. Chignik watershed ecological assessment project season report, 2004. Alaska Department of Fish and Game, Division of Commercial Fisheries, Fishery Management Report No. 06-16, Anchorage.
- Finkle, H. 2006b. Chignik watershed ecological assessment project season report, 2005. Alaska Department of Fish and Game, Division of Commercial Fisheries, Fishery Management Report No. 06-54, Anchorage.

REFERENCES CITED (Continued)

- Finkle, H. and K. A. Bouwens. 2001. Chignik watershed ecological assessment project season report, 2000. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K01-51, Kodiak.
- Johnson, B. A. and B. Barrett. 1988. Estimation of salmon escapement based on stream survey data: a geometric approach. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 4K88-35, Kodiak.
- Nicholson, L., H. O'Neill, and L. Wright. 1980. 1980 Annual management report Chignik Management Area. Alaska Department of Fish and Game, Commercial Fisheries Division, Kodiak.
- Stichert, M. A. 2007. 2005 Chignik Management Area annual management report. Alaska Department of Fish and Game, Fishery Management Report No. 07-15, Anchorage.
- Witteveen, M. A., H. Finkle, P. A. Nelson, J. J. Hasbrouck, and I. Vining. 2005. Review of salmon escapement goals in the Chignik Management Area. Alaska Department of Fish and Game, Fishery Manuscript No. 05-06, Anchorage.

TABLES AND FIGURES

Table 1.—Chignik River sockeye salmon interim escapement objectives.

Date	Escapement		Date	Escapement	
	Lower	Upper		Lower	Upper
June 2	500	1,000	August 3	4,500	10,500
June 4	2,000	3,000	August 6	8,250	21,750
June 6	5,000	7,000	August 9	15,000	30,000
June 8	10,000	14,000	August 12	22,500	37,500
June 10	20,000	25,000	August 15	30,000	45,000
June 12	30,000	40,000	August 18	37,500	52,500
June 14	50,000	70,000	August 21	45,000	60,000
June 16	75,000	110,000	August 24	53,250	66,750
June 18	125,000	160,000	August 27	64,500	70,500
June 20	175,000	220,000	August 31	75,000	75,000
June 22	225,000	275,000			
June 25	275,000	325,000	September 3	3,000	4,000
June 28	300,000	350,000	September 5	6,000	8,000
July 1	325,000	375,000	September 7	10,000	12,000
July 4	350,000	400,000	September 9	14,000	16,000
			September 11	18,000	20,000
July 6	5,000	10,000	September 13	22,000	23,000
July 8	15,000	20,000	September 15 ^a	25,000	25,000
July 10	30,000	40,000			
July 12	45,000	60,000			
July 14	56,000	75,000			
July 16	67,000	90,000			
July 19	86,000	115,000			
July 21	101,000	135,000			
July 23	120,000	160,000			
July 26	135,000	180,000			
July 29	146,000	195,000			
July 31	150,000	200,000			

Escapement Objectives ^{b,c}

Through July 4: 350,000 - 400,000

July 5 - September 30: 250,000 - 300,000

^a Interim escapement objectives are not established for the September 16 through 30 time period.

^b On average, based on historical scale pattern analysis data, the number of late-run sockeye salmon that pass the weir before July 4 equal the number of early-run sockeye salmon that pass the weir after July 4. Therefore, the department targets the early-run escapement goal through July 4.

^c July 5 through September 30 late-run escapement objectives include 50,000 fish in addition to the late-run SEG (200,000 to 250,000) for freshwater subsistence purposes.

Table 2.—Estimated Chignik River Chinook, coho, pink, and chum salmon and Dolly Varden escapement through the Chignik weir, 1970 through 2007.

Year	Escapement ^a				
	Chinook ^b	Coho ^c	Pink ^c	Chum ^c	Dolly Varden ^c
1970	2,500	ND	ND	ND	ND
1971	2,000	ND	ND	ND	ND
1972	1,500	ND	ND	ND	ND
1973	822	ND	ND	ND	ND
1974	672	ND	ND	ND	ND
1975	877	ND	ND	ND	ND
1976	700	ND	ND	ND	ND
1977	798	ND	ND	ND	ND
1978	1,197	ND	ND	ND	ND
1979	1,050	ND	ND	ND	ND
1980	876	ND	ND	ND	ND
1981	1,603	ND	ND	ND	ND
1982	2,412	ND	ND	ND	ND
1983	1,943	ND	ND	ND	ND
1984	5,806	ND	ND	ND	ND
1985	3,144	ND	ND	ND	ND
1986	3,612	ND	ND	ND	ND
1987	2,624	ND	ND	ND	ND
1988	4,868	ND	ND	ND	ND
1989	3,316	ND	ND	ND	ND
1990	4,364	ND	ND	ND	ND
1991	4,531	ND	ND	ND	ND
1992	3,806	ND	ND	ND	ND
1993	1,946	ND	ND	ND	ND
1994	2,963	ND	ND	ND	ND
1995	4,288	ND	ND	ND	ND
1996	3,488	16,843	6,030	136	54,726
1997	3,824	10,810	4,880	483	26,657
1998	3,075	14,124	11,490	156	15,235
1999	3,728	2,414	2,524	48	15,025
2000	4,285	7,062	4,284	48	ND
2001	3,028	103	1,464	66	6,416
2002	3,541	9,262	3,417	67	8,179
2003	6,412	7,635	1,897	68	36,397
2004	7,840	18,810	2,243	276	20,086
2005	6,486	18,206	13,637	408	13,940
2006	3,535	37,113	18,401	99	2,031
2007	2,000	10,299	20,464	118	6,993
Averages					
1988-07	4,066	-	-	-	-
1998-07	4,393	12,503	7,982	135	-
2003-07	5,255	18,413	11,328	194	15,889

^a A video monitoring system was installed at the Chignik weir in 1994.

^b No escapement adjustments are made for Chinook salmon that spawn below the weir, or those removed by the sport fishery. Only large fish enumerated for escapement estimates from 1970 to 1993.

^c No reliable escapement estimates were generated for pink, chum, or coho salmon or Dolly Varden from 1970 to 1996. No post-weir estimates are reported here for these species.

Table 3.—Total Chignik River sockeye salmon escapement and escapement goals, based on postseason analysis, by run, 1970 through 2007.

Year	Early Run	Late Run	Total
1970	536,257	119,952	656,209
1971	671,668	232,501	904,169
1972	326,320	231,270	557,590
1973	533,047	249,144	782,191
1974	351,701	326,245	677,946
1975	308,914	268,734	577,648
1976	551,254	279,509	830,763
1977	482,247	251,753	734,000
1978	458,660	223,887	682,547
1979	385,694	352,122	737,816
1980	311,332	352,729	664,061
1981	438,540	392,909	831,449
1982	616,117	221,601	837,718
1983	426,177	409,458	835,635
1984	597,712	267,862	865,574
1985	376,576	369,262	745,838
1986	566,088	207,231	773,319
1987	589,291	214,452	803,743
1988	420,577	255,180	675,757
1989	384,004	557,171	941,175
1990	434,543	335,867	770,410
1991	672,871	367,227	1,040,098
1992	360,681	405,922	766,603
1993	364,261	333,116	697,377
1994	769,462	197,447	966,909
1995	366,163	373,757	739,920
1996	464,461	284,676	749,137
1997	396,667	378,951	775,618
1998	410,659	290,469	701,128
1999	457,429	258,537	715,966
2000	536,141	269,084	805,225
2001	744,013	392,905	1,136,918
2002	380,701	343,616	724,317
2003	350,004	334,119	684,123
2004	363,800	214,459	578,259
2005	355,091	225,366	580,457
2006	366,497	368,996	735,493
2007	361,091	293,883	654,974
SEG	350,000-400,000	200,000-250,000	550,000-650,000
Averages			
1988-07	447,956	324,037	771,993
1998-07	432,543	299,143	731,686
2003-07	359,297	287,365	646,661

Table 4.—Estimated pink salmon escapement and management objectives in the Chignik Management Area, by district and year, 1970 through 2007.

Year ^a	District ^b					Total
	Chignik Bay	Central	Eastern	Western	Perryville	
1970	43,600	60,700	201,700	202,000	72,600	580,600
1971	5,500	74,800	23,000	268,800	45,000	417,100
1972	5,800	3,100	15,900	8,600	7,800	41,200
1973	2,200	50,200	12,800	62,400	31,500	159,100
1974	4,000	9,800	76,200	77,400	60,200	227,600
1975	1,200	26,400	23,500	141,700	45,300	238,100
1976	12,300	66,000	228,800	114,200	89,300	510,600
1977	3,000	199,900	76,000	355,500	115,400	749,800
1978	10,700	101,200	309,300	333,400	157,500	912,100
1979	1,200	297,000	194,300	185,000	181,300	858,800
1980	3,000	99,400	425,500	139,500	74,800	742,200
1981	1,400	76,500	154,700	249,300	116,000	597,900
1982	2,400	26,100	301,500	45,900	13,400	389,300
1983	1,000	11,000	46,300	36,000	64,500	158,800
1984	123,200	94,000	486,500	188,000	109,800	1,001,500
1985	ND	7,400	212,100	67,500	235,200	522,200
1986	ND	121,900	580,700	43,800	180,500	926,900
1987	ND	65,700	215,600	38,300	65,700	385,300
1988	22,400	216,400	1,005,400	232,400	181,300	1,657,900
1989	13,500	215,000	881,000	57,900	267,400	1,434,800
1990	6,000	131,900	811,400	44,300	88,400	1,082,000
1991	12,200	201,100	125,000	96,800	343,500	778,600
1992	55,800	223,800	1,318,100	38,800	190,400	1,826,900
1993	2,000	160,900	524,700	45,800	448,400	1,181,800
1994	75,800	178,900	863,300	111,600	153,900	1,383,500
1995	180,500	715,500	1,399,300	554,700	582,100	3,432,100
1996	43,100	237,100	1,059,600	220,800	395,700	1,956,300
1997	59,400	594,600	1,287,700	306,300	221,500	2,469,500
1998	24,400	210,900	1,273,200	150,400	222,800	1,881,700
1999	37,300	374,300	615,100	137,900	179,700	1,344,300
2000	27,400	146,100	810,700	130,100	98,700	1,213,000
2001	19,700	460,400	1,470,200	263,000	150,200	2,363,500
2002	16,917	85,755	777,710	85,501	62,170	1,028,053
2003	143,897	576,510	1,408,060	117,650	99,500	2,345,617
2004	27,300	257,000	601,900	94,340	134,320	1,114,860
2005	160,000	473,400	512,350	257,500	188,600	1,591,850
2006	27,401	36,175	195,950	31,800	83,500	374,826
2007	62,464	291,800	565,800	113,000	184,000	1,217,064

-continued-

Table 4.–Page 2 of 2

Year ^a	District ^b					Total
	Chignik Bay	Central	Eastern	Western	Perryville	
Odd Year Management Objective	8,000 to 17,000	87,000 to 190,000	276,000 to 601,000	65,000 to 141,000	105,000 to 228,000	541,000 to 1,177,000
Even Year Management Objective	3,000 to 7,000	62,000 to 140,000	186,000 to 418,000	31,000 to 69,000	45,000 to 102,000	327,000 to 737,000
Averages						
1988-07	50,874	289,377	875,324	154,530	213,805	1,583,909
1998-07	54,678	291,234	823,097	138,119	140,349	1,447,477
2003-07	84,212	326,977	656,812	122,858	137,984	1,328,843

^a From 1984 to 2003 aerial survey escapement estimates were computed by area-under-the-curve methods using a 15.0 day average stream life (Johnson and Barrett 1988). Starting 2004, estimates were computed using peak counts (Witteveen et al. 2005).

^b All estimates were via aerial survey, with the exception of Chignik River which was included in the Chignik Bay District estimate.

Table 5.—Estimated chum salmon escapement and objectives in the Chignik Management Area, by district and year, 1970 through 2007.

Year ^a	District ^b					Total
	Chignik Bay	Central	Eastern	Western	Perryville	
1970	21,000	23,400	126,000	49,700	13,000	233,100
1971	7,100	29,100	219,200	184,100	30,000	469,500
1972	3,300	14,200	107,400	59,000	11,500	195,400
1973	700	12,200	59,100	35,600	9,300	116,900
1974	2,100	18,100	76,300	39,400	12,500	148,400
1975	2,100	18,800	41,300	43,400	20,500	126,100
1976	2,400	17,800	122,300	55,000	8,900	206,400
1977	2,000	9,300	54,500	70,400	15,400	151,600
1978	2,100	13,800	55,800	27,300	5,300	104,300
1979	1,600	44,800	79,500	42,500	12,800	181,200
1980	300	34,200	107,000	56,500	29,100	227,100
1981	500	26,100	126,000	70,300	19,300	242,200
1982	1,400	49,400	145,400	35,400	23,600	255,200
1983	100	17,000	50,200	20,100	8,200	95,600
1984	300	35,400	214,700	73,800	46,000	370,200
1985	0	9,600	4,900	34,600	12,900	62,000
1986	0	31,000	8,500	5,300	7,700	52,500
1987	100	17,500	38,300	19,700	9,800	85,400
1988	15,300	55,800	221,900	27,400	41,400	361,800
1989	4,200	34,700	74,300	7,400	15,900	136,500
1990	1,500	28,000	139,700	28,800	55,800	253,800
1991	0	18,000	70,400	38,100	343,200	469,700
1992	100	173,100	306,900	53,300	40,300	573,700
1993	300	39,400	135,200	14,000	66,800	255,700
1994	1,500	102,600	129,200	23,000	126,000	382,300
1995	10,300	44,500	112,800	45,700	134,600	347,900
1996	16,400	45,100	130,500	44,500	132,000	368,500
1997	18,500	65,700	290,000	60,500	152,800	587,500
1998	4,500	32,000	97,700	30,600	214,500	379,300
1999	2,300	32,400	167,100	16,300	117,300	335,400
2000	100	22,700	216,000	12,700	51,900	303,400
2001	4,100	36,500	406,900	35,500	67,800	550,800
2002	67	11,615	174,850	17,082	32,020	235,634
2003	899	43,191	152,854	39,050	64,331	300,325
2004	376	30,310	277,240	3,100	38,492	349,518
2005	30,000	159,100	36,350	22,000	61,250	308,700
2006	1,099	3,450	53,940	6,000	29,000	93,489
2007	6,118	25,200	58,000	26,500	122,280	238,098
Management Objective	200	6,700	25,200	5,400	12,800	50,400
Averages						
1988-07	5,883	50,168	162,592	27,577	95,384	341,603
1998-07	4,956	39,647	164,093	20,883	79,887	309,466
2003-07	7,698	52,250	115,677	19,330	63,071	258,026

^a From 1984 to 2003 aerial survey escapement estimates were computed by area-under-the-curve methods using a 15.0 day average stream life (Johnson and Barrett 1988). Starting 2004, estimates were computed using peak counts (Witteveen et al. 2005).

^b All estimates were via aerial survey, with the exception of Chignik River which was included in the Chignik Bay District estimate.

Table 6.—Chignik Management Area Chinook salmon harvest (including home pack and the department’s test fishery catches), by district and year, 1970 through 2007.

Year	District					Total
	Chignik Bay	Central	Eastern	Western	Perryville	
1970	867	5	55	230	69	1,226
1971	656	23	134	266	931	2,010
1972	226	0	24	72	142	464
1973	520	0	5	0	0	525
1974	200	27	0	28	0	255
1975	542	7	0	0	0	549
1976	2,135	15	3	60	77	2,290
1977	692	12	0	1	5	710
1978	1,386	49	19	130	19	1,603
1979	856	101	6	181	109	1,253
1980	929	148	169	739	359	2,344
1981	2,006	302	188	99	99	2,694
1982	3,269	41	38	1,354	534	5,236
1983	3,560	161	260	1,390	117	5,488
1984	3,696	63	72	487	0	4,318
1985	1,809	50	7	21	0	1,887
1986	2,592	58	14	350	23	3,037
1987	1,931	60	6	512	142	2,651
1988	4,331	1,094	190	1,216	465	7,296
1989	3,532	9	1	0	0	3,542
1990	3,719	2,175	175	3,190	642	9,901
1991	1,996	775	165	197	24	3,157
1992	3,181	2,010	181	4,300	1,160	10,832
1993	5,240	6,865	2,568	3,113	1,729	19,515
1994	1,808	1,303	43	452	313	3,919
1995	3,219	845	108	897	424	5,493
1996	1,590	1,022	263	162	108	3,145
1997	1,384	1,609	60	60	7	3,120
1998	1,805	1,798	79	567	254	4,503
1999	2,270	852	147	216	22	3,507
2000	598	530	53	1,421	10	2,612
2001	1,235	770	302	627	5	2,939
2002	920	17	0	584	0	1,521
2003	2,834	189	0	45	0	3,068
2004	2,520	0	0	0	0	2,520
2005	2,714	391	0	297	6	3,408
2006	2,009	165	3	79	0	2,256
2007	667	421	152	532	1	1,773
Averages						
1988-07	2,379	1,142	225	898	259	4,901
1998-07	1,757	513	74	437	30	2,811
2003-07	2,149	233	31	191	1	2,605

Table 7—Chignik Management Area sockeye salmon harvest (including home pack and the department’s test fishery catches), by district and year, 1970 through 2007.

Year	District					Total
	Chignik Bay	Central	Eastern	Western	Perryville	
1970	1,122,993	10,252	187,210	3,751	1,528	1,325,734
1971	885,632	41,958	81,155	6,403	988	1,016,136
1972	354,912	2,429	15,985	4,734	158	378,218
1973	845,079	8,039	17,234	2	0	870,354
1974	539,196	120,412	199	3,098	0	662,905
1975	387,128	12,448	0	17	0	399,593
1976	1,112,533	48,327	1,254	425	1,189	1,163,728
1977	1,851,733	119,484	0	909	81	1,972,207
1978	1,474,673	89,826	7,161	4,482	141	1,576,283
1979	909,056	104,892	12,558	20,319	2,866	1,049,691
1980	708,828	74,628	60,947	9,227	6,336	859,966
1981	1,355,524	426,159	36,618	14,751	6,417	1,839,469
1982	1,413,806	66,278	10,209	30,279	1,114	1,521,686
1983	1,597,059	123,590	73,824	25,246	4,456	1,824,175
1984	1,942,822	517,653	184,495	15,470	179	2,660,619
1985	811,956	77,314	18,720	13,175	337	921,502
1986	1,389,172	182,884	6,424	44,362	22,992	1,645,834
1987	1,559,757	255,118	14,498	56,524	12,941	1,898,838
1988	529,540	124,103	25,699	93,070	23,429	795,841
1989	1,156,782	2,473	32	0	0	1,159,287
1990	1,400,069	566,601	51,443	53,192	22,345	2,093,650
1991	1,487,421	315,570	59,751	19,766	13,157	1,895,665
1992	792,889	332,860	12,327	30,004	109,369	1,277,449
1993	762,730	557,020	186,364	54,051	137,186	1,697,351
1994	908,042	573,484	20,041	64,325	53,081	1,618,973
1995	1,083,707	415,436	48,842	79,874	96,186	1,724,045
1996	1,003,683	743,658	145,668	47,529	17,855	1,958,393
1997	407,427	295,084	20,650	44,768	2,418	770,347
1998	622,005	286,643	30,555	87,940	27,296	1,054,439
1999	2,356,146	612,589	79,717	57,859	10,216	3,116,527
2000	1,327,249	358,985	71,572	15,034	2,385	1,775,225
2001	1,082,291	382,172	28,377	17,673	1,074	1,511,587
2002	993,756	44,368	2,835	9,425	169	1,050,553
2003	1,000,247	64,440	1,701	29,069	4,840	1,100,297
2004	704,471	181	0	0	0	704,652
2005	1,039,076	84,879	2	27,927	249	1,152,133
2006	726,749	103,272	3,118	69,570	0	902,709
2007	545,438	138,922	29,882	119,489	816	834,547
Averages						
1988-07	996,486	300,137	40,929	46,028	26,104	1,409,684
1998-07	1,039,743	207,645	24,776	43,399	4,705	1,320,267
2003-07	803,196	78,339	6,941	49,211	1,181	938,868

Table 8.—Total harvest of sockeye salmon considered by regulation to be Chignik-bound in the Chignik, Cape Igvak, and Southeastern District Mainland commercial salmon fisheries, 1978 through 2007.

Year	Testfish		Commercial Catch		Home Pack		Total CMA Harvest		Cape Igvak ^a		SEDM ^b		Total Chignik-Bound	
	Number	Pounds	Number	Pounds	Number	Pounds ^c	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
1970	ND	ND	1,325,734	9,210,127	ND	ND	1,325,734	9,210,127	ND	ND	ND	ND	1,325,734	9,210,127
1971	ND	ND	1,016,136	7,534,367	ND	ND	1,016,136	7,534,367	ND	ND	ND	ND	1,016,136	7,534,367
1972	ND	ND	378,218	2,863,742	ND	ND	378,218	2,863,742	ND	ND	ND	ND	378,218	2,863,742
1973	ND	ND	870,354	7,023,294	ND	ND	870,354	7,023,294	ND	ND	ND	ND	870,354	7,023,294
1974	ND	ND	662,905	4,756,653	ND	ND	662,905	4,756,653	ND	ND	ND	ND	662,905	4,756,653
1975	ND	ND	399,593	2,773,725	ND	ND	399,593	2,773,725	ND	ND	ND	ND	399,593	2,773,725
1976	ND	ND	1,163,728	8,562,989	ND	ND	1,163,728	8,562,989	ND	ND	ND	ND	1,163,728	8,562,989
1977	ND	ND	1,972,207	17,247,659	ND	ND	1,972,207	17,247,659	ND	ND	ND	ND	1,972,207	17,247,659
1978	ND	ND	1,576,283	12,451,982	ND	ND	1,576,283	12,451,982	225,078	1,583,809	ND	ND	1,801,361	14,035,791
1979	ND	ND	1,049,691	7,862,600	ND	ND	1,049,691	7,862,600	13,950	96,507	ND	ND	1,063,641	7,959,107
1980	ND	ND	859,966	5,795,098	ND	ND	859,966	5,795,098	32	147	63,724	442,601	923,722	6,237,846
1981	ND	ND	1,839,469	13,486,031	ND	ND	1,839,469	13,486,031	282,727	1,876,246	122,198	888,410	2,244,394	16,250,687
1982	ND	ND	1,521,686	11,340,439	ND	ND	1,521,686	11,340,439	166,756	1,162,053	62,789	463,729	1,751,231	12,966,221
1983	ND	ND	1,824,175	11,926,829	ND	ND	1,824,175	11,926,829	318,048	1,926,770	227,392	1,631,668	2,369,615	15,485,267
1984	ND	ND	2,660,619	18,536,287	ND	ND	2,660,619	18,536,287	449,372	2,820,646	423,292	3,053,430	3,533,283	24,410,363
1985	4,875	30,480	916,627	5,415,817	ND	ND	921,502	5,446,297	123,627	637,207	51,421	337,919	1,096,550	6,421,423
1986	ND	ND	1,645,834	11,254,860	ND	ND	1,645,834	11,254,860	188,017	1,153,092	118,006	841,446	1,951,857	13,249,398
1987	679	4,637	1,898,159	13,997,077	ND	ND	1,898,838	14,001,714	321,506	2,146,841	146,886	1,121,094	2,367,230	17,269,649
1988	3,425	24,287	792,416	5,690,165	ND	ND	795,841	5,714,452	10,520	63,641	19,320	140,708	825,681	5,918,801
1989	6,433	46,532	1,152,854	7,922,748	ND	ND	1,159,287	7,969,280	0	0	4,485	32,262	1,163,772	8,001,542
1990	5,522	33,915	2,088,128	13,775,854	ND	ND	2,093,650	13,809,769	107,706	665,309	117,065	783,670	2,318,421	15,258,748
1991	8,106	54,892	1,887,559	12,889,560	ND	ND	1,895,665	12,944,452	324,195	1,886,494	152,714	1,037,726	2,372,574	15,868,672
1992	12,423	80,326	1,265,026	8,292,576	ND	ND	1,277,449	8,372,902	150,434	896,108	93,845	608,765	1,521,728	9,877,775
1993	5,444	34,231	1,691,907	10,228,401	ND	ND	1,697,351	10,262,632	300,055	1,639,082	128,608	847,879	2,126,014	12,749,593
1994	9,139	54,433	1,609,834	10,091,402	ND	ND	1,618,973	10,145,835	250,230	1,423,150	142,350	934,493	2,011,553	12,503,478
1995	9,023	57,674	1,715,022	11,464,647	0	0	1,724,045	11,522,321	169,530	899,572	89,086	547,563	1,982,661	12,969,456
1996	4,317	36,511	1,954,036	14,866,234	40	304	1,958,393	14,903,049	308,327	1,954,430	127,201	884,305	2,393,921	17,741,784
1997	11,299	77,874	758,384	4,782,715	664	4,187	770,347	4,864,776	0	0	0	0	770,347	4,864,776
1998	12,374	66,040	1,041,798	6,372,010	267	1,633	1,054,439	6,439,683	8,813	39,133	66,893	408,902	1,130,145	6,887,718
1999	5,994	42,216	3,110,507	20,527,837	26	172	3,116,527	20,570,225	456,039	2,469,213	173,621	1,086,186	3,746,187	24,125,624
2000	11,604	88,790	1,763,621	13,577,434	0	0	1,775,225	13,666,224	271,344	1,703,875	103,419	737,462	2,149,988	16,107,561

-continued-

Table 8.—Page 2 of 2.

Year	Testfish		Commercial Catch		Home Pack		Total CMA Harvest		Cape Igvak ^a		SEDM ^b		Total Chignik-Bound	
	Number	Pounds	Number	Pounds	Number	Pounds ^c	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
2001 ^d	14,011	98,197	1,497,359	10,972,234	217	1,590	1,511,587	11,072,021	215,214	1,287,154	51,141	368,970	1,777,942	12,728,145
2002	9,101	61,656	1,040,081	7,176,261	1,371	9,460	1,050,553	7,247,377	136,488	727,894	63,026	502,353	1,250,067	8,477,624
2003	5,582	36,334	1,092,304	7,137,591	2,411	15,755	1,100,297	7,189,680	121,887	599,342	70,044	466,153	1,292,228	8,255,175
2004	5,919	38,317	697,043	4,460,437	1,690	10,998	704,652	4,509,752	160,665	781,265	55,123	355,703	920,440	5,291,017
2005	7,076	43,988	1,143,693	7,468,609	1,364	8,702	1,152,133	7,521,299	274,328	1,681,630	170,662	1,088,207	1,597,123	10,291,136
2006	6,641	42,420	895,801	5,804,939	267	1,625	902,709	5,848,984	41,834	266,483	62,010	398,724	1,006,553	6,514,191
2007	5,152	38,112	829,110	5,769,736	285	1,346	834,547	5,809,194	52,527	325,619	0	0	887,074	6,134,813
Averages														
1988-07	7,929	52,837	1,401,324	9,463,570	-	-	1,409,684	9,519,195	168,007	965,470	84,531	561,502	1,662,221	11,028,381
1998-07	8,345	55,607	1,311,132	8,926,709	790	5,128	1,320,267	8,987,444	173,914	988,161	81,594	541,266	1,575,775	10,481,300
2003-07	6,074	39,834	931,590	6,128,262	1,203	7,685	938,868	6,175,782	130,248	730,868	71,568	461,757	1,140,684	7,297,266

^a The Cape Igvak allocation began in 1978. From 1978 to 2002, 80% of the Cape Igvak sockeye salmon harvest was considered Chignik River-bound. Beginning in 2002, that percentage was changed to 90%.

^b Beginning in 1980, 80% of the SEDM harvest in specific areas during specific times was considered Chignik River-bound.

^c Weights of home pack fish are not reported on fish tickets; therefore, the weights were calculated from the average weight of the commercial harvest for that year.

^d Due to a strike by Alaska Peninsula fishermen, forgone harvest of 27,896 sockeye salmon was added to the SEDM catch for management purposes; this forgone harvest is not included in this table.

Table 9.—Chignik sockeye salmon escapement, total harvest considered Chignik-bound, and total run, 1970 through 2007.

Year	Early Run			Late Run			Total Run ^{a,b,c}		
	Esc.	Harvest	Run	Esc.	Harvest	Run	Esc.	Harvest	Run
1970	536,257	1,566,065	2,102,322	119,952	262,244	382,196	656,209	1,828,309	2,484,518
1971	671,668	555,832	1,227,500	232,501	709,190	941,691	904,169	1,265,022	2,169,191
1972	326,320	43,220	369,540	231,270	386,615	617,885	557,590	429,835	987,425
1973	533,047	610,488	1,143,535	249,144	355,195	604,339	782,191	965,683	1,747,874
1974	351,701	204,722	556,423	326,245	648,283	974,528	677,946	853,005	1,530,951
1975	308,914	7,873	316,787	268,734	417,560	686,294	577,648	425,433	1,003,081
1976	551,254	599,341	1,150,595	279,509	727,043	1,006,552	830,763	1,326,384	2,157,147
1977	482,247	534,198	1,016,445	251,753	1,602,363	1,854,116	734,000	2,136,561	2,870,561
1978	458,660	940,188	1,398,848	223,887	885,173	1,109,060	682,547	1,825,361	2,507,908
1979	385,694	186,537	572,231	352,122	933,788	1,285,910	737,816	1,120,325	1,858,141
1980	311,332	73,742	385,074	352,729	849,980	1,202,709	664,061	923,722	1,587,783
1981	438,540	800,364	1,238,904	392,909	1,444,030	1,836,939	831,449	2,244,394	3,075,843
1982	616,117	1,324,396	1,940,513	221,601	426,835	648,436	837,718	1,751,231	2,588,949
1983	426,177	1,128,246	1,554,423	409,458	1,241,369	1,650,827	835,635	2,369,615	3,205,250
1984	597,712	2,919,984	3,517,696	267,862	613,299	881,161	865,574	3,533,283	4,398,857
1985	376,576	654,431	1,031,007	369,262	442,119	811,381	745,838	1,096,550	1,842,388
1986	566,088	1,364,295	1,930,383	207,231	587,562	794,793	773,319	1,951,857	2,725,176
1987	589,291	1,947,088	2,536,379	214,452	420,142	634,594	803,743	2,367,230	3,170,973
1988	420,577	271,377	691,954	255,180	554,304	809,484	675,757	825,681	1,501,438
1989	384,004	234,237	618,241	557,171	929,535	1,486,706	941,175	1,163,772	2,104,947
1990	434,543	582,520	1,017,063	335,867	1,735,901	2,071,768	770,410	2,318,421	3,088,831
1991	657,511	1,711,549	2,384,420	382,587	661,025	1,028,252	1,040,098	2,372,574	3,412,672
1992	360,681	744,417	1,105,098	405,922	777,311	1,183,233	766,603	1,521,728	2,288,331
1993	364,261	926,892	1,291,153	333,116	1,199,122	1,532,238	697,377	2,126,014	2,823,391
1994	769,462	1,595,176	2,364,638	197,447	416,377	613,824	966,909	2,011,553	2,978,462
1995	366,163	666,799	1,032,962	373,757	1,315,862	1,689,619	739,920	1,982,661	2,722,581
1996	464,461	1,688,264	2,152,725	284,676	705,657	990,333	749,137	2,393,921	3,143,058
1997	396,667	234,824	631,491	378,951	535,523	914,474	775,618	770,347	1,545,965
1998	410,659	313,158	723,817	290,469	816,987	1,107,456	701,128	1,130,145	1,831,273
1999	457,429	2,022,272	2,479,701	258,537	1,723,915	1,982,452	715,966	3,746,187	4,462,153
2000	536,141	1,574,391	2,110,532	269,084	575,597	844,681	805,225	2,149,988	2,955,213
2001	744,013	563,539	1,307,552	392,905	1,214,403	1,607,308	1,136,918	1,777,942	2,914,860
2002	380,701	684,728	1,065,428	343,616	565,339	908,955	724,317	1,250,067	1,974,383
2003	350,004	640,084	990,088	334,119	652,144	986,263	684,123	1,292,228	1,976,351
2004	363,800	727,975	1,091,775	214,459	192,465	406,924	578,259	920,440	1,498,700
2005	355,091	1,109,881	1,464,972	225,366	487,242	712,608	580,457	1,597,123	2,177,580
2006	366,497	436,028	802,525	368,996	570,525	939,521	735,493	1,006,553	1,742,046
2007	361,091	267,805	628,896	293,883	619,269	913,152	654,974	887,074	1,542,048
Averages									
1988-07	447,188	849,796	1,297,752	324,805	812,425	1,136,463	771,993	1,662,221	2,434,214
1998-07	432,543	833,986	1,266,529	299,143	741,789	1,040,932	731,686	1,575,775	2,307,461
2003-07	359,297	636,355	995,651	287,365	504,329	791,694	646,661	1,140,684	1,787,345

^a Includes Cape Igvak and SEDM harvests considered Chignik-bound as defined in regulation. However, portions of the harvests from Cape Igvak and SEDM from 1970 to 1979 were not considered Chignik-bound by regulation, but were included in this table for comparison purposes.

^b Does not include subsistence-caught fish.

^c Includes harvests from the Chignik Lagoon test fishery and fish retained for home pack.

Table 10.—Harvest of sockeye salmon considered by regulation to be Chignik-bound in the Chignik, Cape Igvak, and Southeastern District Mainland commercial salmon fisheries from June 1 through July 25, 1978 through 2007.

Year	Chignik ^a		Cape Igvak ^a		Southeastern District Mainland ^a		Total
	Catch ^b	Percent	Catch ^b	Percent	Catch ^c	Percent	
1978	1,454,389	86.6	225,078	13.4	ND	ND	1,679,467
1979	794,504	98.3	13,950	1.7	ND	ND	808,454
1980	670,001	91.3	32	0.0	63,724	8.7	733,757
1981	1,606,300	79.9	282,727	14.1	122,198	6.1	2,011,225
1982	1,250,768	84.5	166,756	11.3	62,789	4.2	1,480,313
1983	1,450,832	72.7	318,048	15.9	227,392	11.4	1,996,272
1984	2,474,405	73.9	449,372	13.4	423,292	12.6	3,347,069
1985	690,698	79.8	123,627	14.3	51,421	5.9	865,746
1986	1,456,729	82.6	188,017	10.7	118,006	6.7	1,762,752
1987	1,659,236	78.0	321,506	15.1	146,886	6.9	2,127,628
1988	675,487	95.8	10,520	1.5	19,320	2.7	705,327
1989	496,044	99.1	0	0.0	4,485	0.9	500,529
1990	1,205,575	84.3	107,706	7.5	117,065	8.2	1,430,346
1991 ^d	1,962,583	80.5	324,195	13.3	152,714	6.3	2,439,492
1992	1,054,309	81.2	150,434	11.6	93,845	7.2	1,298,588
1993	1,495,098	77.7	300,055	15.6	128,608	6.7	1,923,761
1994 ^e	1,632,435	80.6	250,230	12.4	142,350	7.0	2,025,015
1995	1,024,785	79.8	169,530	13.2	89,086	6.9	1,283,401
1996	1,710,249	79.7	308,327	14.4	127,201	5.9	2,145,777
1997	443,892	100.0	0	0.0	0	0.0	443,892
1998 ^f	786,466	91.2	8,813	1.0	66,893	7.8	862,172
1999	2,326,811	78.7	456,039	15.4	173,621	5.9	2,956,471
2000	1,509,652	80.1	271,344	14.4	103,419	5.5	1,884,415
2001 ^g	1,134,991	79.4	215,214	15.1	79,037	5.5	1,429,242
2002	849,980	81.0	136,488	13.0	63,026	6.0	1,049,494
2003	855,179	81.7	121,887	11.6	70,044	6.7	1,047,110
2004	681,120	75.9	160,665	17.9	55,123	6.1	896,908
2005	1,098,718	70.8	274,328	17.7	177,906	11.5	1,550,952
2006	741,887	87.7	41,834	4.9	62,010	7.3	845,731
2007	601,213	92.0	52,527	8.0	0	0.0	653,740
Averages							
1988-07	1,114,324	84	168,007	10	86,288	6	1,368,618
1998-07	1,058,602	82	173,914	12	85,108	6	1,317,624
2003-07	795,623	82	130,248	12	73,017	6	998,888

^a Through 2001, the Cape Igvak and Southeastern District Mainland figures represent 80% of the total sockeye salmon catch for those areas through July 25, based on the regulations in effect during those years. In 2002 the BOF increased the percentage of sockeye salmon harvest considered Chignik bound from 80% to 90% in the Cape Igvak fishery. The figures reported in this table are the portion of the catches considered Chignik-bound. These figures do not include Chignik test fishery harvests or fish retained for home pack as they are not included in the allocation scheme.

^b Beginning in 1978 the Cape Igvak Salmon Management Plan allocated up to 15% of the total catch of Chignik-bound sockeye salmon to the Cape Igvak fishery

Table 10.—Page 2 of 2

- ^c Beginning in 1985 the Southeastern District Mainland was allowed an allocation of 6.2% of the total harvest of Chignik bound sockeye salmon through July 25. Certain areas (which changed frequently) were excluded from the allocation and managed for local (Orzinski Lake) stocks (see regulations from the individual years). After July 25 the entire Southeast District Mainland was managed based on local stock abundance. The allocation level changed to 6.0% beginning in 1988. Beginning in 1992, the allocation of Chignik bound sockeye to the Southeastern District Mainland fishery was increased to 7.0%. Prior to the 1996 season, the BOF decreased the allocation from 7.0% to 6.0%.
- ^d Includes a forgone harvest of 278,305 sockeye salmon during a Chignik area strike (June 23 to July 4).
- ^e Includes a forgone harvest of 208,921 sockeye salmon during a Chignik area strike (June 2 to June 25).
- ^f Includes a forgone harvest of 52,131 sockeye salmon during a Chignik area strike (June 16 to June 29).
- ^g Includes a forgone harvest of 389,887 sockeye salmon in Chignik during a Chignik area strike (June 16 to 29), and foregone harvest of 27,896 sockeye salmon in the SEDM during a strike on the South Peninsula (June 14 to July 2).

Table 11.—Chignik Management Area coho salmon harvest (including home pack and the department's test fishery catches), by district and year, 1970 through 2007.

Year	District					Total
	Chignik Bay	Central	Eastern	Western	Perryville	
1970	4,578	62	399	9,745	564	15,348
1971	10,928	62	301	2,297	969	14,557
1972	17,692	2	160	1,579	182	19,615
1973	22,304	6	12	0	0	22,322
1974	11,056	414	0	775	0	12,245
1975	52,407	260	0	0	616	53,283
1976	34,426	173	109	32	427	35,167
1977	16,810	189	7	378	46	17,430
1978	14,467	24	21	3,848	1,852	20,212
1979	52,966	3,556	3,869	31,300	7,438	99,129
1980	49,784	7,167	13,872	34,631	14,119	119,573
1981	35,578	8,693	6,222	22,047	6,265	78,805
1982	132,262	6,564	31,476	122,707	7,264	300,273
1983	29,519	330	441	27,173	4,464	61,927
1984	72,722	1,705	403	33,263	2,035	110,128
1985	156,553	7,111	3,203	23,357	938	191,162
1986	60,197	3,027	1,033	33,726	18,650	116,633
1987	77,333	3,806	7	58,688	10,580	150,414
1988	94,292	21,628	6,167	207,086	41,247	370,420
1989	68,231	2	0	0	0	68,233
1990	61,260	27,659	32	23,422	17,758	130,131
1991	56,574	9,294	1,187	57,373	41,197	165,625
1992	80,946	19,612	4,260	140,560	65,565	310,943
1993	48,808	36,421	4,240	84,056	55,934	229,459
1994	70,541	19,794	176	110,476	36,217	237,204
1995	54,646	46,975	458	88,116	91,323	281,518
1996	45,361	35,440	33	91,587	20,825	193,246
1997	32,847	45,878	1,801	9,139	1,243	90,908
1998	23,070	32,743	1,227	55,359	17,140	129,539
1999	23,144	24,308	3,095	36,405	2,658	89,610
2000	11,620	37,943	2,555	69,599	1,505	123,222
2001	10,007	31,062	2,303	86,580	1,496	131,448
2002	8,461	4,442	0	36,283	186	49,372
2003	37,800	7,632	0	55,225	3,239	103,896
2004	37	0	0	0	0	37
2005	510	730	12	5,045	659	6,956
2006	7,057	2,170	1	29,993	0	39,221
2007	11,790	12,830	420	47,525	712	73,277
Averages						
1988-07	37,350	20,828	1,398	61,691	19,945	141,213
1998-07	13,350	15,386	961	42,201	2,760	74,658
2003-07	11,439	4,672	87	27,558	922	44,677

Table 12.—Chignik Management Area pink salmon harvest (including home pack and the department's test fishery catches), by district and year, 1970 through 2007.

Year	District					Total
	Chignik Bay	Central	Eastern	Western	Perryville	
1970	46,297	27,919	268,857	442,684	371,415	1,157,172
1971	65,281	20,518	28,959	285,447	212,085	612,290
1972	31,606	766	12,928	14,880	11,981	72,161
1973	22,674	293	2,477	28	0	25,472
1974	33,484	22,084	568	13,379	0	69,515
1975	27,377	31,342	0	7,446	0	66,165
1976	108,827	16,583	28,828	135,803	105,246	395,287
1977	60,932	120,018	239	379,038	44,579	604,806
1978	137,074	61,224	86,778	419,280	280,758	985,114
1979	312,406	284,414	292,364	744,613	271,401	1,905,198
1980	180,912	108,682	472,510	216,460	114,620	1,093,184
1981	121,380	210,023	173,293	433,605	224,312	1,162,613
1982	82,973	80,606	89,074	602,408	18,323	873,384
1983	27,284	7,861	7,817	164,338	113,878	321,178
1984	165,178	47,250	57,715	173,820	841	444,804
1985	14,429	16,087	6,570	80,577	42,465	160,128
1986	191,264	44,127	49,635	200,793	161,306	647,125
1987	13,887	7,769	2,079	187,701	35,339	246,775
1988	119,794	318,370	1,006,366	1,141,382	411,247	2,997,159
1989	27,691	21	0	0	0	27,712
1990	94,528	233,677	40,574	135,810	45,419	550,008
1991	76,163	173,967	27,979	419,264	471,875	1,169,248
1992	178,105	205,750	183,119	628,900	358,199	1,554,073
1993	55,909	205,037	52,755	685,605	649,071	1,648,377
1994	59,425	99,149	12,952	174,641	84,896	431,063
1995	106,939	469,745	8,572	791,718	681,024	2,057,998
1996	1,804	20,717	7,201	100,871	58,475	189,068
1997	39,461	603,575	72,347	118,003	11,045	844,431
1998	26,054	233,732	66,725	343,187	107,290	776,988
1999	59,001	664,208	40,571	771,411	163,460	1,698,651
2000	28,067	271,417	10,500	106,147	11,933	428,064
2001	75,142	641,438	97,438	424,537	43,212	1,281,767
2002	10,253	17,580	0	36,918	1,299	66,050
2003	56,042	88,736	267	326,239	31,354	502,638
2004	2,378	2	0	0	0	2,380
2005	71,438	99,491	21	20,952	2,143	194,045
2006	62,419	79,726	79,465	161,964	0	383,574
2007	187,670	612,921	43,379	1,152,331	23,447	2,019,748
Averages						
1988-07	66,914	251,963	87,512	376,994	157,769	941,152
1998-07	57,846	270,925	33,837	334,369	38,414	735,391
2003-07	75,989	176,175	24,626	332,297	11,389	620,477

Table 13.—Chignik Management Area chum salmon harvest (including home pack and the department's test fishery catches), by district and year, 1970 through 2007.

Year	District					Total
	Chignik Bay	Central	Eastern	Western	Perryville	
1970	1,660	28,628	241,108	139,551	26,305	437,252
1971	19,449	13,723	102,344	177,534	40,902	353,952
1972	18,178	1,566	27,723	18,535	12,296	78,298
1973	7,254	229	1,218	16	0	8,717
1974	17,317	13,516	255	3,224	0	34,312
1975	21,137	3,225	0	799	0	25,161
1976	19,237	3,358	10,020	33,051	15,737	81,403
1977	8,621	8,888	1,507	88,027	3,409	110,452
1978	15,020	10,317	17,451	45,991	32,110	120,889
1979	32,176	11,427	36,090	82,326	26,888	188,907
1980	19,944	38,902	56,805	91,868	45,002	252,521
1981	38,061	160,730	108,668	221,579	51,294	580,332
1982	16,034	33,669	64,513	253,299	22,581	390,096
1983	16,747	9,815	8,250	101,959	22,641	159,412
1984	8,173	8,150	21,134	25,364	482	63,303
1985	4,905	5,242	864	10,704	1,090	22,805
1986	18,167	29,502	17,880	74,070	37,021	176,640
1987	5,163	9,437	8,890	86,898	16,873	127,261
1988	7,013	39,316	77,511	102,730	41,205	267,775
1989	1,587	34	3	0	0	1,624
1990	11,460	113,741	27,463	91,603	25,737	270,004
1991	17,545	51,429	4,925	98,603	88,594	261,096
1992	12,711	45,569	61,209	65,466	37,179	222,134
1993	8,116	43,306	21,157	25,045	24,736	122,360
1994	25,250	69,552	4,333	94,116	34,025	227,276
1995	14,588	107,066	8,074	158,273	92,953	380,954
1996	782	46,993	19,837	36,303	16,976	120,891
1997	20,978	104,259	11,397	16,280	2,991	155,905
1998	7,352	43,191	5,180	41,425	31,848	128,996
1999	12,150	75,495	11,332	37,089	4,531	140,597
2000	8,389	66,904	8,045	34,823	2,796	120,957
2001	11,534	84,132	50,911	37,466	14,960	199,003
2002	3,949	9,643	513	40,337	117	54,559
2003	10,891	11,304	50	39,883	1,916	64,044
2004	499	6	0	0	0	505
2005	2,370	5,329	2	1,054	66	8,821
2006	2,303	9,455	776	49,096	0	61,630
2007	3,829	19,595	7,851	46,943	335	78,553
Averages						
1988-07	9,165	47,316	16,028	50,827	21,048	144,384
1998-07	6,327	32,505	8,466	32,812	5,657	85,767
2003-07	3,978	9,138	1,736	27,395	463	42,711

Table 14.—Value of the commercial salmon harvest, by species, and average value per active permit, in dollars, in the Chignik Management Area, 1970 through 2007.

Year	Chinook		Sockeye		Coho		Pink		Chum		Total Value	Number of Permits ^a	Value Per Permit
	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average			
1970	6,129	77	2,190,272	27,378	18,397	230	635,673	7,946	376,025	4,700	3,226,496	80	40,331
1971	6,472	84	2,034,279	26,419	23,240	302	366,693	4,762	326,760	4,244	2,757,444	77	35,811
1972	2,028	25	825,498	10,319	35,699	446	48,401	605	87,759	1,097	999,385	80	12,492
1973	5,255	67	3,030,057	38,355	73,663	932	20,610	261	10,180	129	3,139,765	79	39,744
1974	2,941	31	3,618,781	38,498	31,933	340	64,069	682	51,125	544	3,768,849	94	40,094
1975	6,561	76	1,384,271	16,096	213,539	2,483	104,115	1,211	61,704	717	1,770,190	86	20,584
1976	13,800	179	4,751,000	61,701	138,000	1,792	568,300	7,381	183,600	2,384	5,654,700	77	73,438
1977	18,828	214	14,553,720	165,383	104,819	1,191	920,881	10,465	368,066	4,183	15,966,314	88	181,435
1978	56,700	597	15,653,500	164,774	116,400	1,225	1,131,500	11,911	404,500	4,258	17,362,600	95	182,764
1979	32,050	311	11,345,503	110,151	710,192	6,895	2,622,269	25,459	126,866	1,232	14,836,880	103	144,047
1980	67,657	651	5,532,290	53,195	520,655	5,006	1,477,060	14,203	1,061,963	10,211	8,659,625	104	83,266
1981	75,231	716	17,262,119	164,401	439,900	4,190	1,881,334	17,917	2,431,421	23,156	22,090,005	105	210,381
1982	75,276	731	13,038,510	126,587	1,782,027	17,301	578,184	5,613	1,356,597	13,171	16,830,594	103	163,404
1983	96,159	943	10,728,088	105,177	219,650	2,153	240,171	2,355	421,713	4,134	11,705,781	102	114,763
1984	114,502	1,145	20,402,076	204,021	759,972	7,600	330,916	3,309	146,024	1,460	21,753,490	100	217,535
1985	67,088	633	7,997,834	75,451	1,471,418	13,881	140,076	1,321	59,475	561	8,735,891	106	82,414
1986	84,800	831	16,882,290	165,513	667,740	6,546	356,147	3,492	456,546	4,476	18,447,523	102	180,858
1987	72,739	706	24,783,033	240,612	1,035,129	10,050	269,868	2,620	339,819	3,299	26,500,588	103	257,287
1988	286,740	2,839	14,350,354	142,083	4,153,424	41,123	6,771,266	67,042	2,189,293	21,676	27,751,077	101	274,763
1989	78,999	790	13,047,378	130,474	436,892	4,369	32,994	330	4,745	47	13,601,008	100	136,010
1990	185,256	1,834	22,509,923	222,871	700,309	6,934	502,693	4,977	878,510	8,698	24,776,691	101	245,314
1991	50,027	490	11,002,784	107,870	650,626	6,379	402,916	3,950	502,860	4,930	12,609,213	102	123,620
1992	193,326	1,914	12,552,025	124,277	1,323,107	13,100	811,882	8,038	414,005	4,099	15,294,345	101	151,429
1993	175,690	1,722	8,210,106	80,491	730,622	7,163	637,666	6,252	184,012	1,804	9,938,096	102	97,432
1994	38,096	385	10,046,245	101,477	1,094,415	11,055	226,504	2,288	430,888	4,352	11,836,148	99	119,557
1995	60,174	602	11,969,210	119,692	834,337	8,343	977,811	9,778	634,780	6,348	14,476,312	100	144,763
1996	25,041	250	12,640,560	126,406	447,228	4,472	24,827	248	32,279	323	13,169,935	100	131,699
1997	20,642	211	4,860,589	49,598	453,905	4,632	348,042	3,551	239,400	2,443	5,922,577	98	60,434
1998	31,934	376	6,631,192	78,014	397,413	4,675	310,323	3,651	137,647	1,619	7,508,509	85	88,335
1999	27,212	302	21,132,550	234,806	170,931	1,899	578,861	6,432	118,547	1,317	22,028,101	90	244,757

-continued-

Table 14.—Page 2 of 2.

Year	Chinook		Sockeye		Coho		Pink		Chum		Total Value	Number of Permits ^a	Value Per Permit
	Total	Average	Total	Average	Total	Average	Total	Average	Total	Average			
2000	16,336	165	11,812,368	119,317	283,061	2,859	106,470	1,075	93,030	940	12,311,264	99	124,356
2001	12,205	133	7,419,339	80,645	263,160	2,860	366,714	3,986	209,239	2,274	8,270,657	92	89,898
2002	3,516	36	4,564,214	46,103	36,078	364	10,333	104	40,671	411	4,654,812	99	47,018
2003	20,212	202	5,283,962	52,840	173,625	1,736	182,100	1,821	71,140	711	5,731,039	100	57,310
2004 ^a	26,191	262	3,568,350	35,684	59	1	835	8	647	6	3,596,082	100	35,961
2005 ^a	36,060	377	6,314,036	64,429	11,280	115	55,070	562	10,917	111	6,427,363	98	65,585
2006 ^a	26,895	560	4,703,317	97,986	105,132	2,190	126,309	2,631	81,123	1,690	5,042,776	48	105,058
2007 ^b	26,176	476	4,154,210	75,531	195,754	3,559	1,034,322	18,806	162,089	2,947	5,572,550	55	101,319
Averages													
1988-07	67,036	696	9,838,636	104,530	623,068	6,391	675,397	7,277	321,791	3,337	11,525,928	94	122,231
1998-07	22,674	289	7,558,354	88,535	163,649	2,026	277,134	3,908	92,505	1,203	8,114,315	87	95,960
2003-07	27,107	375	4,804,775	65,294	97,170	1,520	279,727	4,766	65,183	1,093	5,273,962	80	73,047

^a Includes the number of commercial permits that received income from the harvest. These figures do not include the department's test fishery harvests.

^b The 2007 average exvessel values per pound were: Chinook- \$0.88, sockeye- \$0.72, coho- \$0.36, pink- \$0.14, chum- \$0.25.

Table 15.—Total commercial salmon harvests (including home pack and the department's test fishery harvests) from the Chignik Management Area by species and year, 1970 through 2007.

Year	Permits Making		Chignik Management Area Harvest					
	Deliveries	Landings	Chinook	Sockeye	Coho	Pink	Chum	Total
1970	80	2,343	1,226	1,325,734	15,348	1,157,172	437,252	2,936,732
1971	77	2,383	2,010	1,016,136	14,557	612,290	353,952	1,998,945
1972	80	1,626	464	378,218	19,615	72,161	78,298	548,756
1973	80	2,187	525	870,354	22,322	25,472	8,717	927,390
1974	94	2,286	255	662,905	12,245	69,515	34,312	779,232
1975	86	1,844	549	399,593	53,283	66,165	25,161	544,751
1976	77	2,407	2,290	1,163,728	35,167	395,287	81,403	1,677,875
1977	88	2,426	710	1,972,207	17,430	604,806	110,452	2,705,605
1978	95	3,005	1,603	1,576,283	20,212	985,114	120,889	2,704,101
1979	103	3,009	1,253	1,049,691	99,129	1,905,198	188,907	3,244,178
1980	104	3,134	2,344	859,966	119,573	1,093,184	252,521	2,327,588
1981	105	4,222	2,694	1,839,469	78,805	1,162,613	580,332	3,663,913
1982	103	3,606	5,236	1,521,686	300,273	873,384	390,096	3,090,675
1983	102	4,357	5,488	1,824,175	61,927	321,178	159,412	2,372,180
1984	100	3,927	4,318	2,660,619	110,128	444,804	63,303	3,283,172
1985	107	3,392	1,887	921,502	191,162	160,128	22,805	1,297,484
1986	102	4,178	3,037	1,645,834	116,633	647,125	176,640	2,589,269
1987	104	3,856	2,651	1,898,838	150,414	246,775	127,261	2,425,939
1988	102	3,895	7,296	795,841	370,420	2,997,159	267,775	4,438,491
1989	101	3,183	3,542	1,159,287	68,233	27,712	1,624	1,260,398
1990	102	5,405	9,901	2,093,650	130,131	550,008	270,004	3,053,694
1991	103	3,856	3,157	1,895,665	165,625	1,169,248	261,096	3,494,791
1992	102	4,172	10,832	1,277,449	310,943	1,554,073	222,134	3,375,431
1993	103	4,241	19,515	1,697,351	229,459	1,648,377	122,360	3,717,062
1994	100	3,707	3,919	1,618,973	237,204	431,063	227,276	2,518,435
1995	101	5,113	5,493	1,724,045	281,518	2,057,998	380,954	4,450,008
1996	101	4,565	3,145	1,958,393	193,246	189,068	120,891	2,464,743
1997	100	3,394	3,120	770,347	90,908	844,431	155,905	1,864,711
1998	86	3,348	4,503	1,054,439	129,539	776,988	128,996	2,094,465
1999	91	4,382	3,507	3,116,527	89,610	1,698,651	140,597	5,048,892
2000	100	3,268	2,612	1,775,225	123,222	428,064	120,957	2,450,080
2001	93	2,906	2,939	1,511,587	131,448	1,281,767	199,003	3,126,744
2002	42	2,432	1,521	1,050,553	49,372	66,050	54,559	1,222,055
2003	44	2,073	3,068	1,100,297	103,896	502,638	64,044	1,773,943
2004	33	1,346	2,520	704,652	37	2,380	505	711,473
2005	97	1,669	3,408	1,152,133	6,956	194,045	8,821	1,365,363
2006	49	2,066	2,256	902,709	39,221	383,547	61,630	1,389,363
2007	56	2,101	1,773	834,547	73,277	2,019,748	78,553	3,007,898
Averages								
1988-07	85	3,356	4,901	1,409,684	141,213	941,151	144,384	2,641,402
1998-07	69	2,559	2,811	1,320,267	74,658	735,388	85,767	2,219,028
2003-07	56	1,851	2,605	938,868	44,677	620,472	42,711	1,649,608

Table 16.—Number of subsistence permits issued and returned and estimated salmon subsistence harvest, by species and year, 1980 through 2006.

Year	Permits		Estimated Salmon Harvest					
	Issued	Returned	Chinook	Sockeye	Coho	Chum	Pink	Total
1980	82	37	6	12,475	32	169	478	13,160
1981	29	7	0	2,049	0	0	0	2,049
1982	59	15	3	8,532	12	0	2	8,549
1983	32	21	0	3,078	1,319	850	1,250	6,497
1984	77	64	23	8,747	464	204	330	9,768
1985	59	48	1	7,177	50	25	26	7,279
1986	74	38	4	10,347	205	77	98	10,731
1987	2	1	0	400	0	0	0	400
1988	80	34	9	9,073	1,455	142	54	10,733
1989	68	23	24	7,551	384	147	81	8,187
1990	72	23	103	8,099	210	115	470	8,997
1991	95	58	42	11,483	13	81	275	11,894
1992	98	19	55	8,648	709	145	305	9,862
1993	201	141	122	14,710	3,765	642	1,265	20,504
1994	219	122	165	13,978	4,055	382	1,720	20,300
1995	111	95	98	9,563	1,191	150	723	11,725
1996	119	104	48	7,357	2,126	355	2,204	12,090
1997	126	103	28	13,442	2,678	840	2,035	19,023
1998	104	72	91	7,750	1,390	186	1,007	10,424
1999	106	88	243	9,040	1,679	136	1,191	12,289
2000	130	112	163	9,561	1,802	517	1,185	13,228
2001	135	122	171	8,633	1,859	213	2,787	13,663
2002	120	86	74	10,092	1,401	23	390	11,980
2003	146	127	267	10,989	2,256	286	1,597	15,395
2004	104	57	88	7,029	1,981	202	1,047	10,357
2005	119	100	224	8,171	2,112	353	730	11,590
2006	113	79	258	8,079	1,539	275	1,035	11,186
Averages								
1987-06	113	78	114	9,182	1,630	260	1,005	12,191
1997-06	120	95	161	9,279	1,870	303	1,300	12,914
2002-06	120	90	182	8,872	1,858	228	960	12,102

Source: Alaska Department of Fish and Game, Division of Subsistence, Alaska Subsistence Fisheries Database

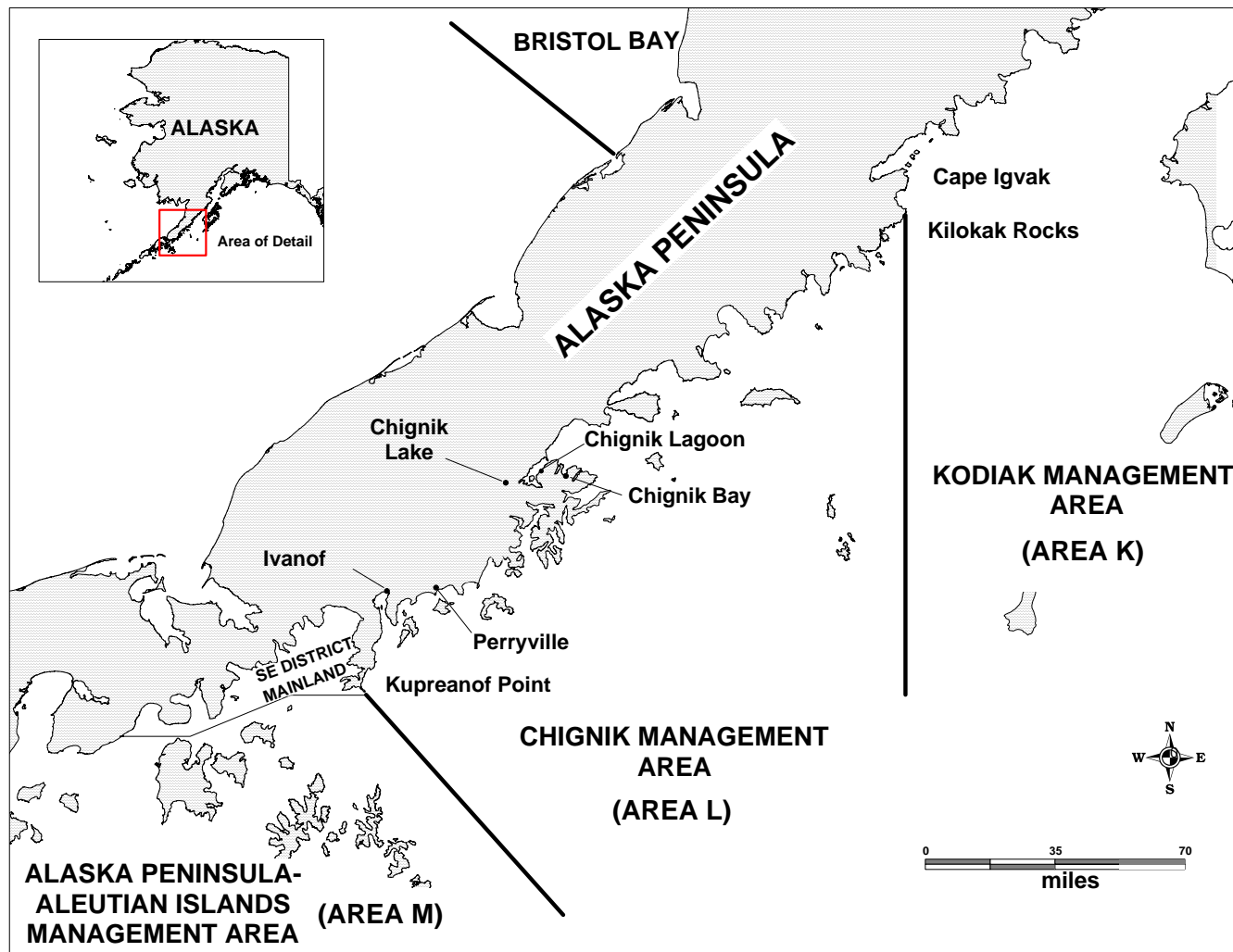


Figure 1.—Map of the Alaska Peninsula illustrating the relative locations of the Chignik, Kodiak, and Alaska Peninsula and Aleutians Islands Management Areas

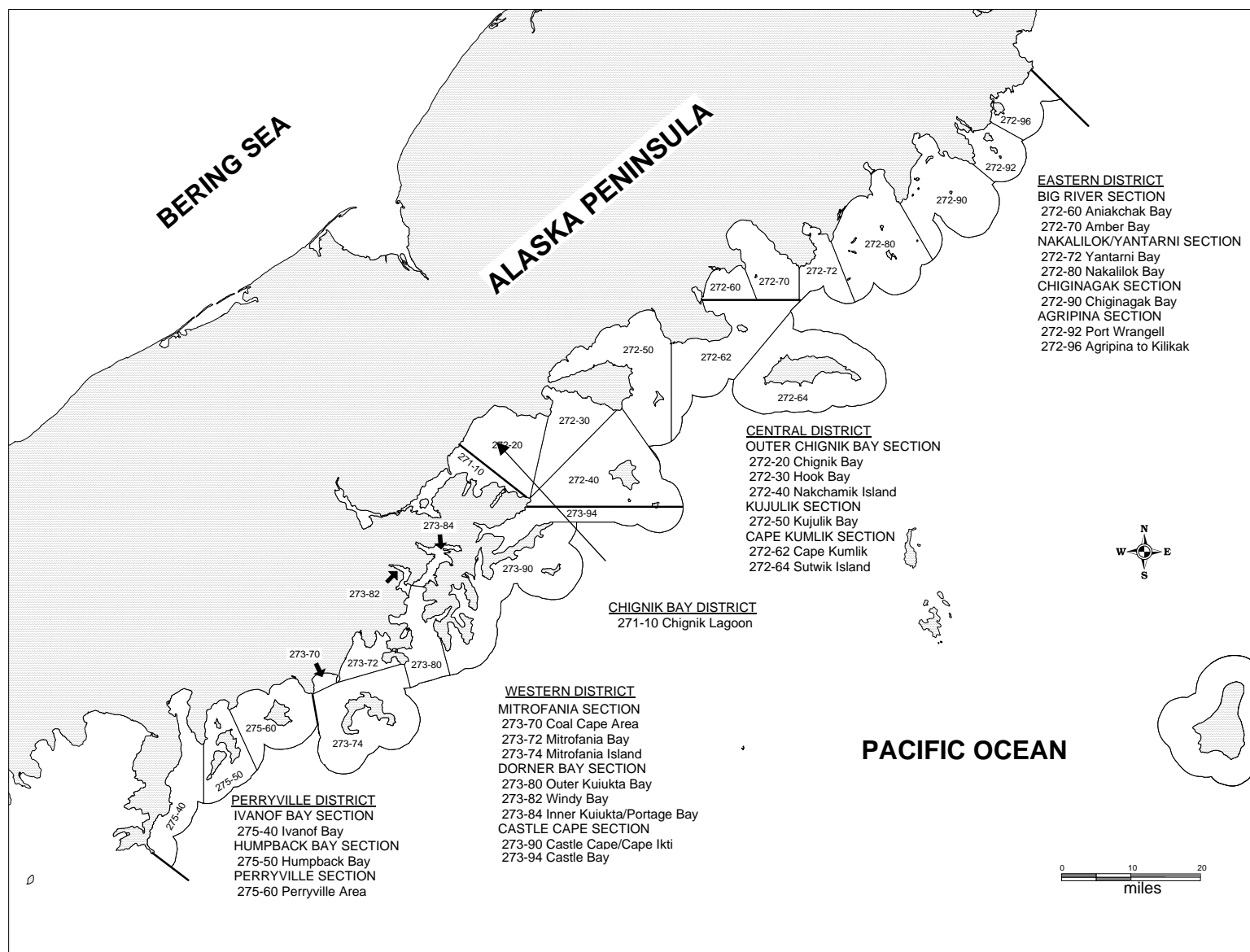


Figure 2.—Map of the Chignik Management Area illustrating district and section boundaries and statistical areas.

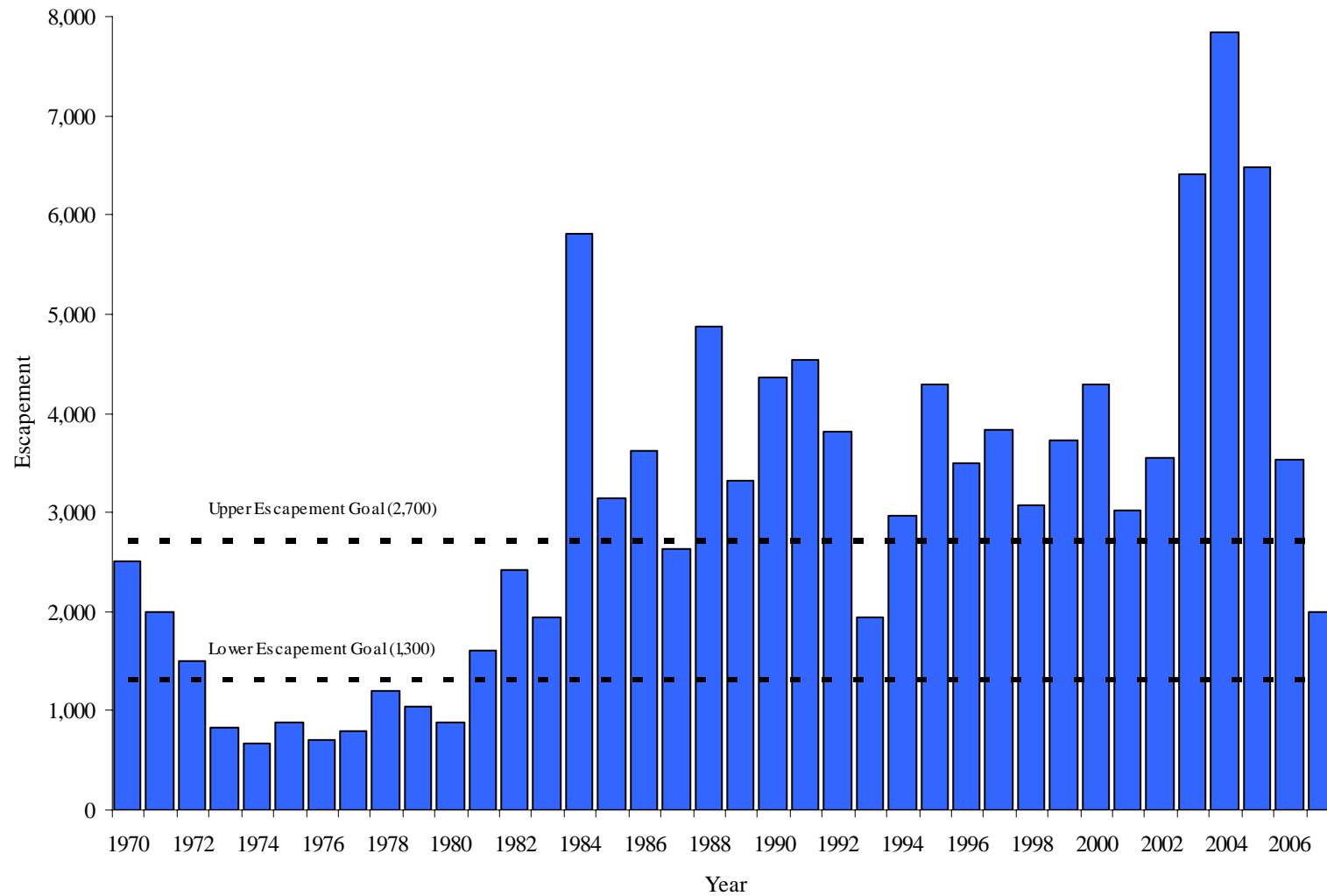


Figure 3.—Chignik River Chinook salmon escapement through the Chignik weir by year, 1970 through 2007, as compared to the 2007 biological escapement goal (BEG) range.

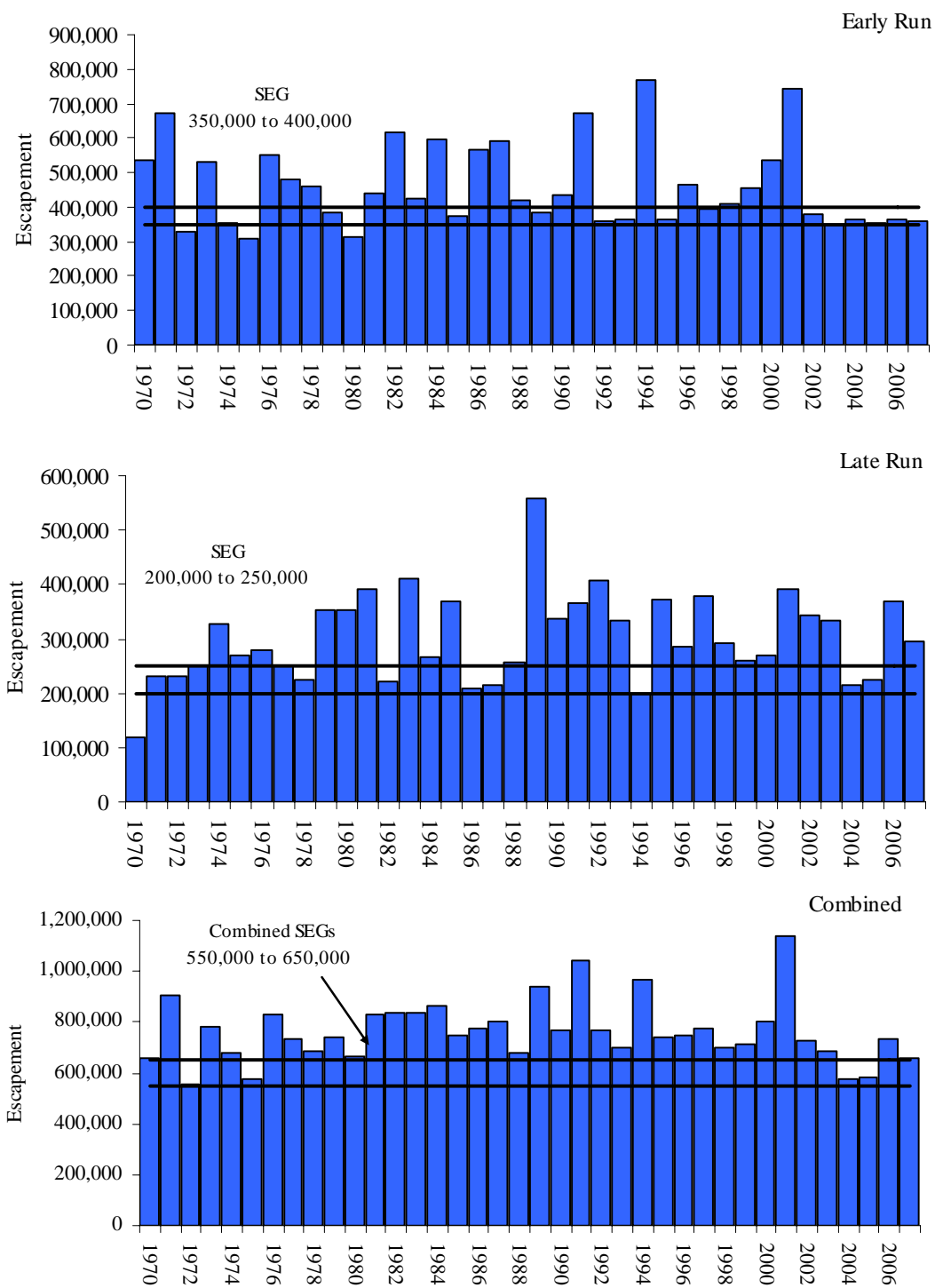


Figure 4.—Chignik River sockeye salmon early-run, late-run, and combined run escapements 1970 through 2007, compared to 2007 sustainable escapement goal (SEG) range.

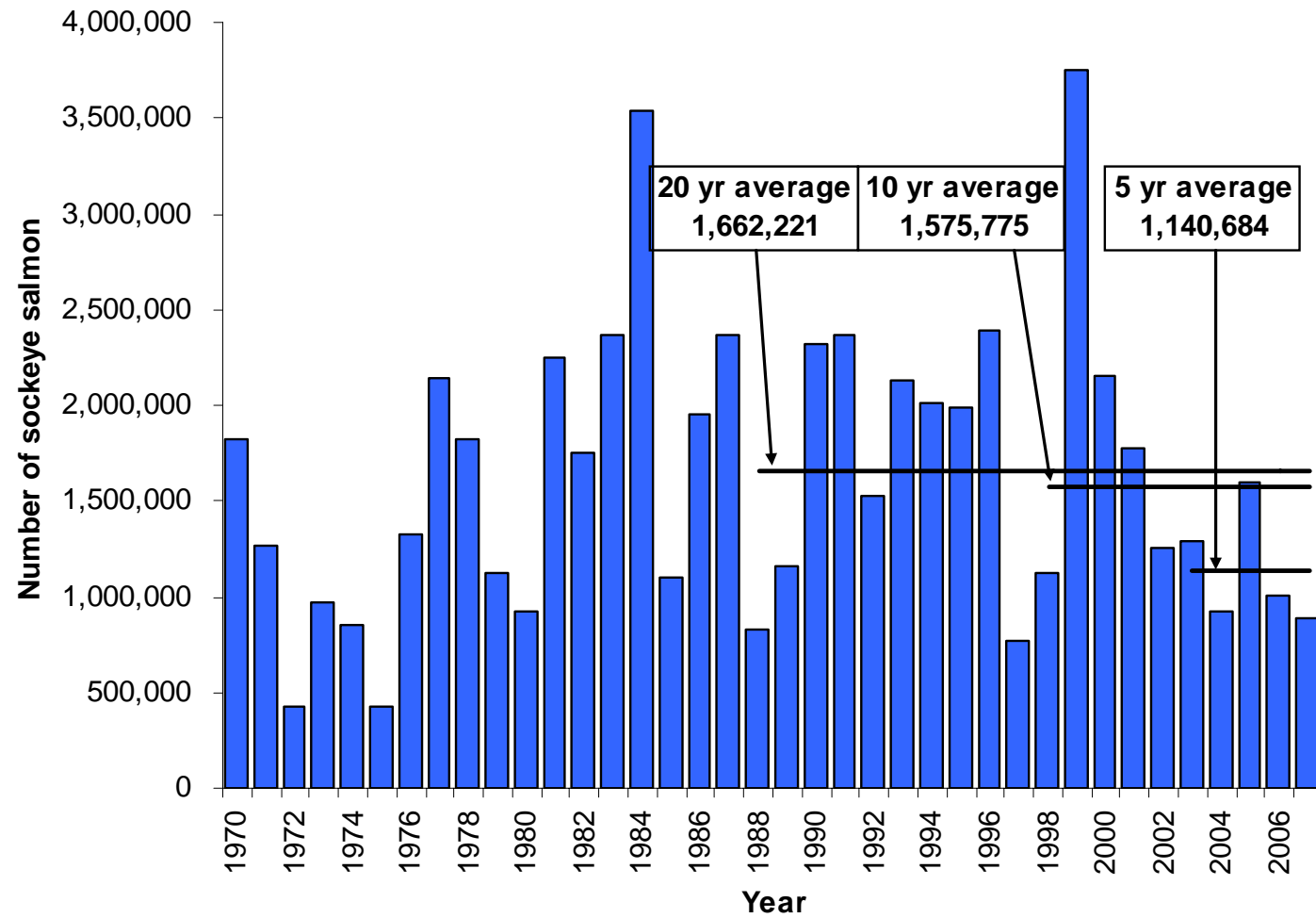


Figure 5.—Chignik-bound sockeye salmon total harvest, 1970 through 2007

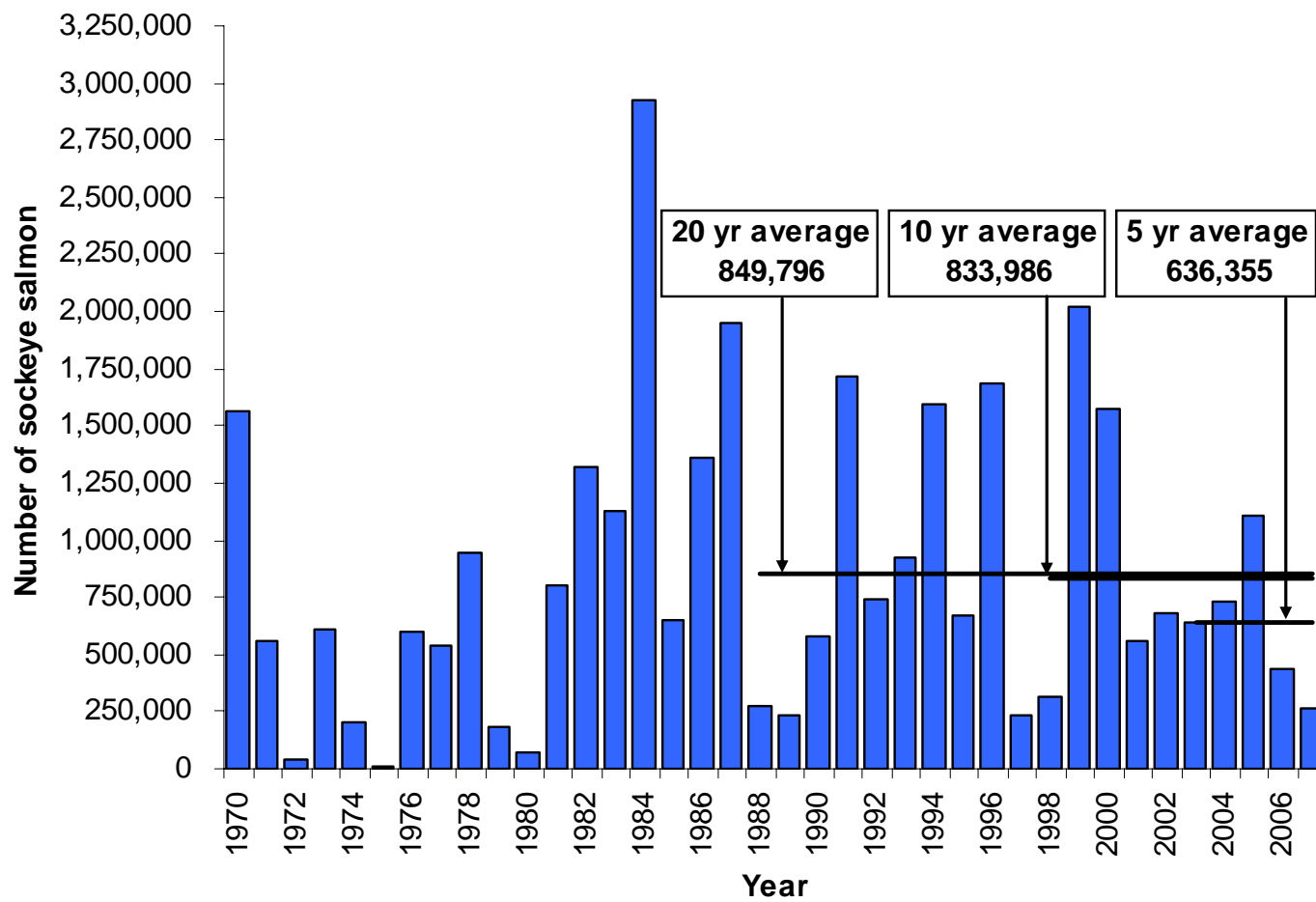


Figure 6.—Chignik-bound early-run sockeye salmon harvest, 1970 through 2007.

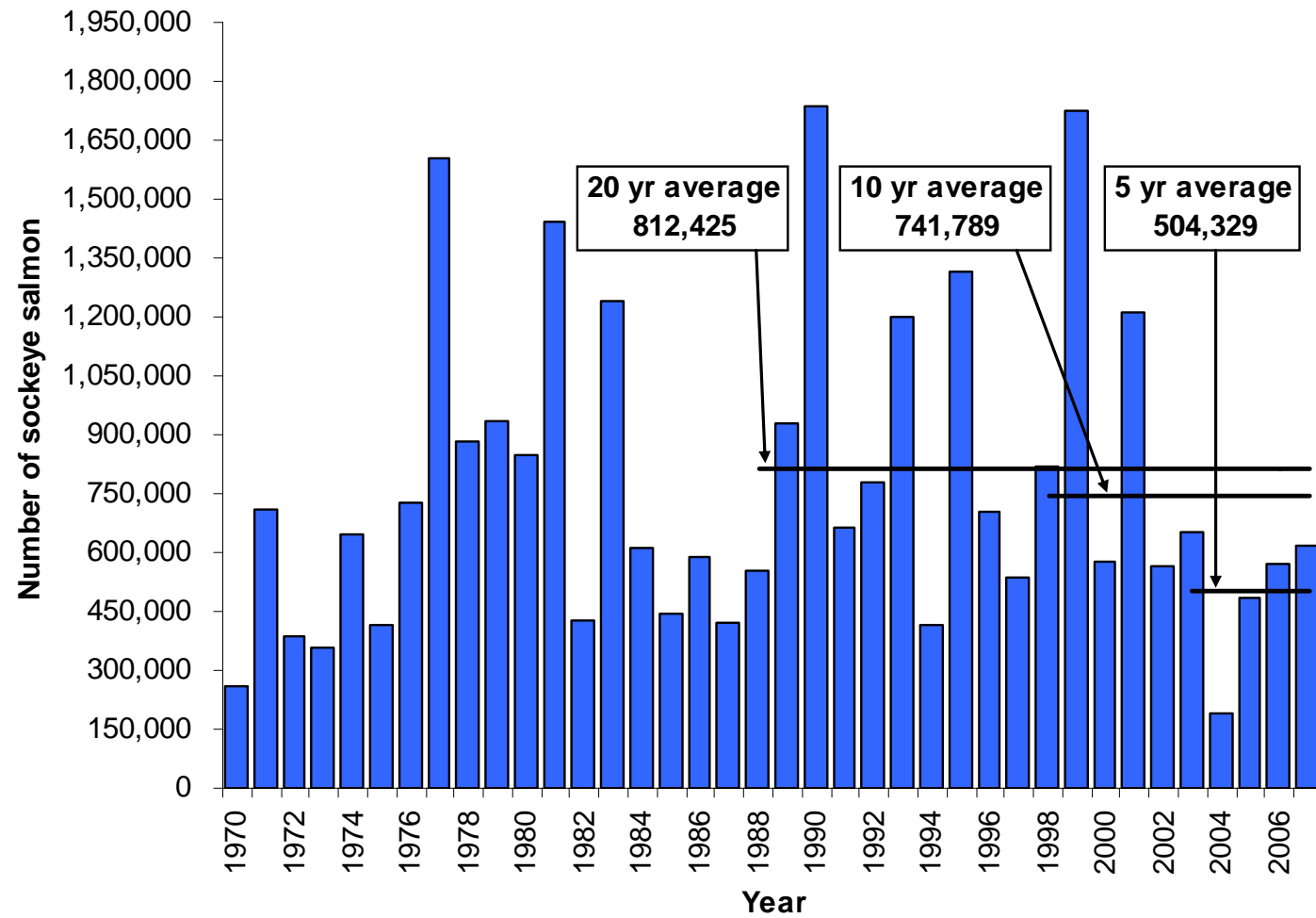


Figure 7.—Chignik-bound late-run sockeye salmon harvest, 1970 through 2007.

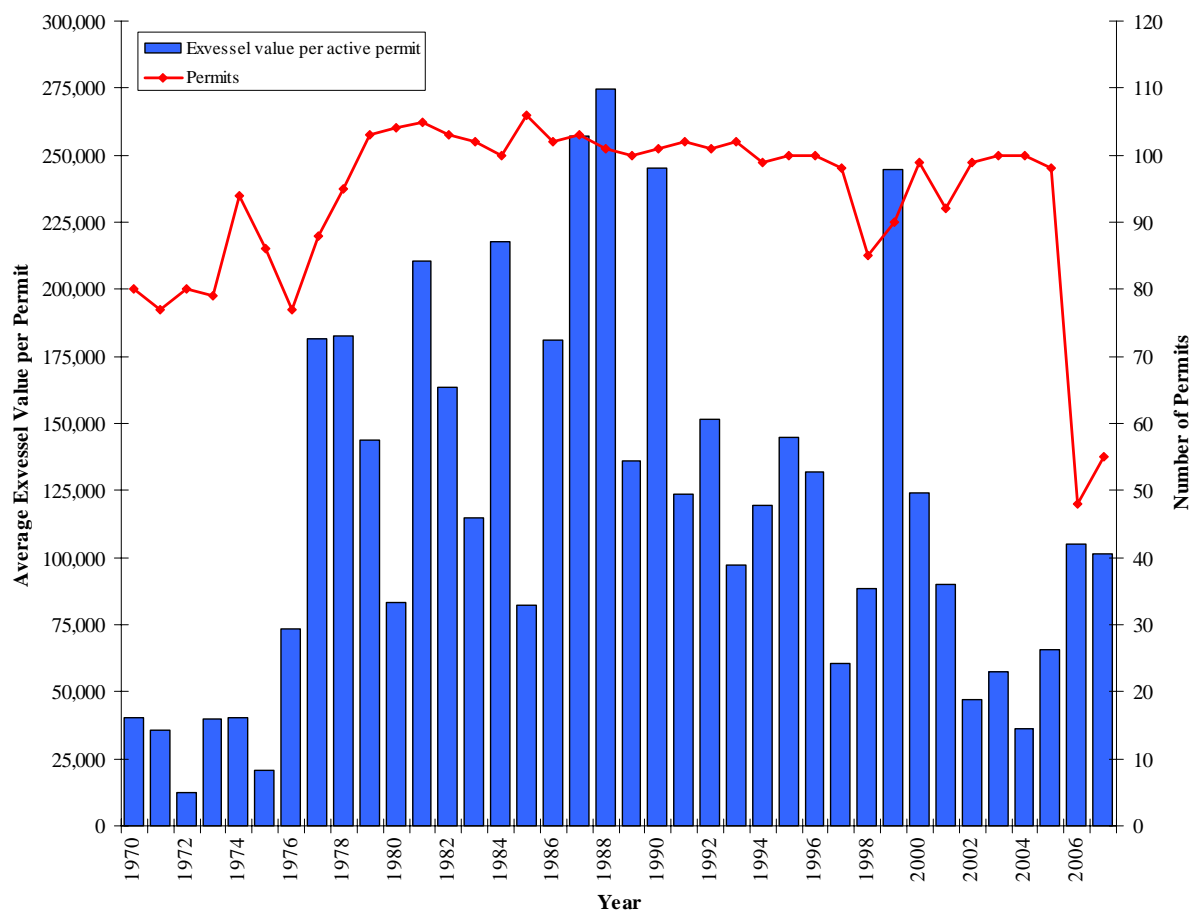


Figure 8.—Average exvessel value (\$) per permit (bars) and total permits (line) fished by year 1970 through 2007.

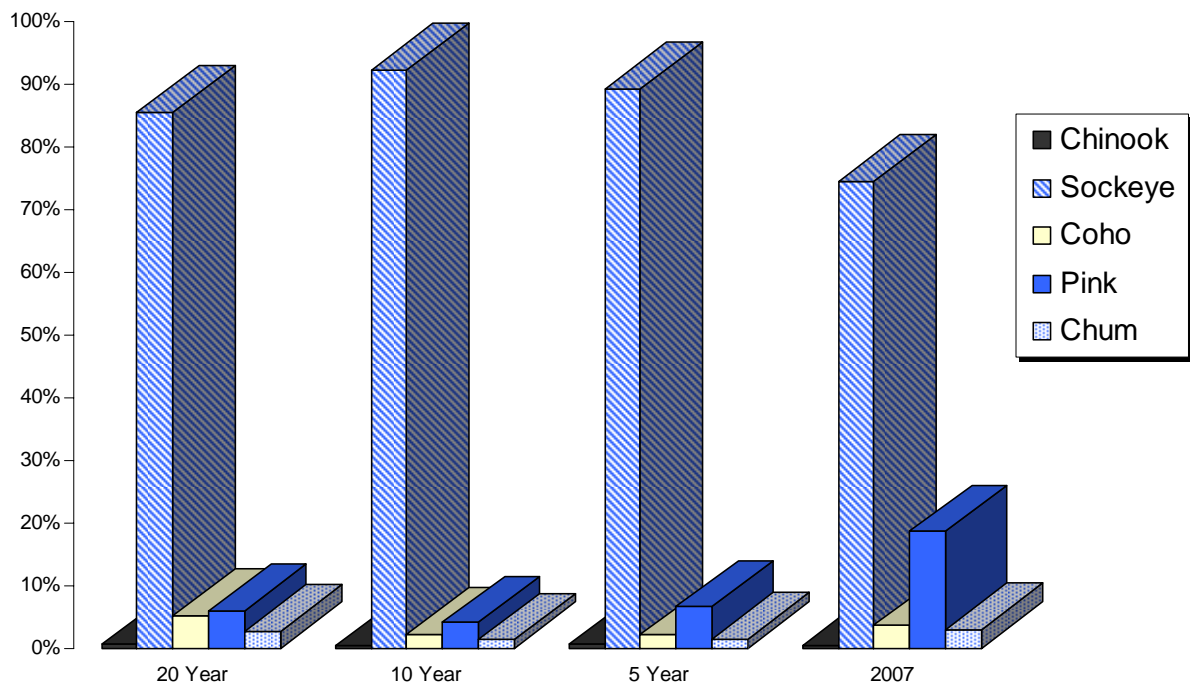


Figure 9.—Average harvest composition for salmon delivered in the CMA, by species.

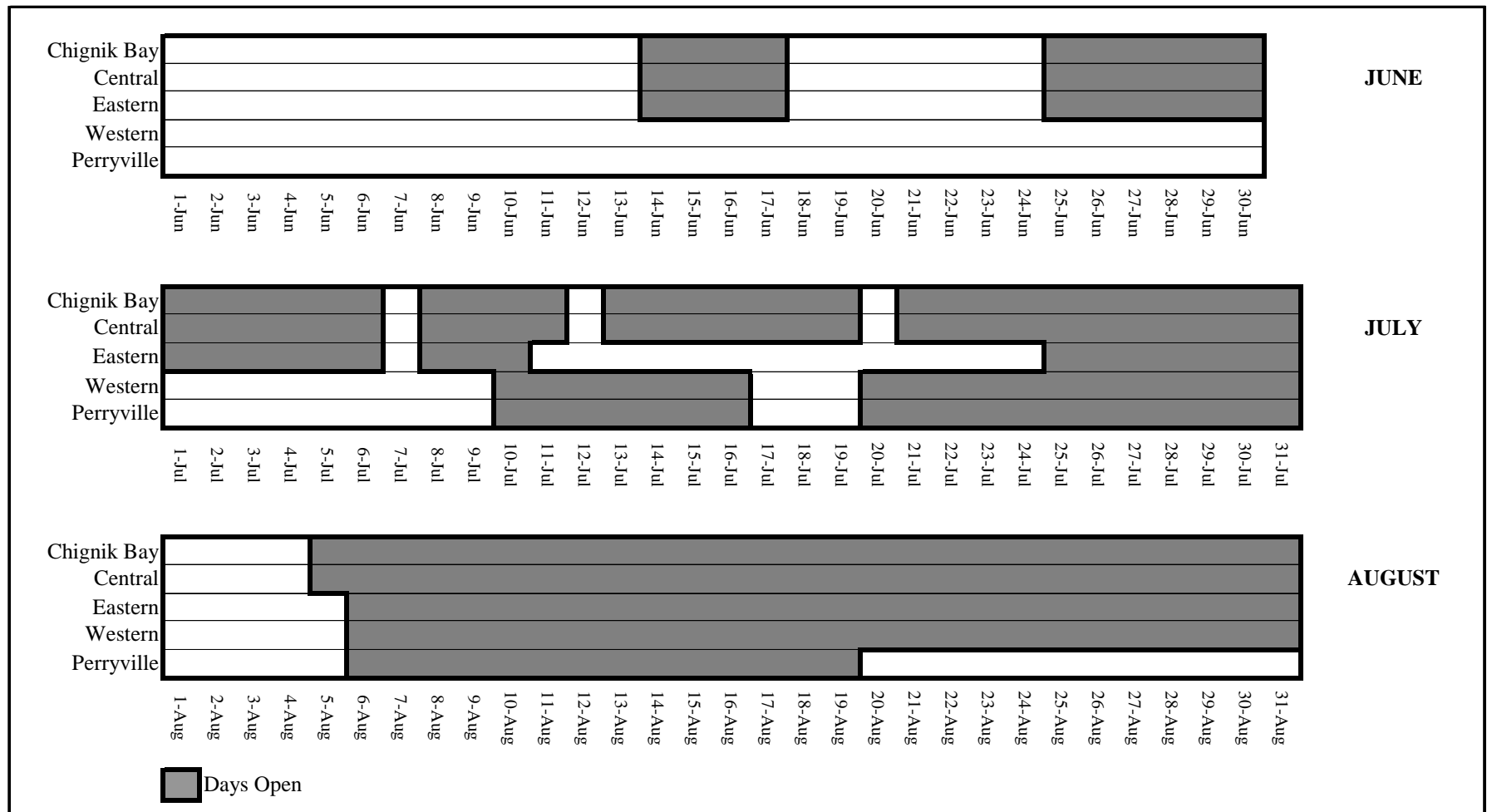


Figure 10.—Representation of days open to commercial salmon fishing, by district and month, 2006.

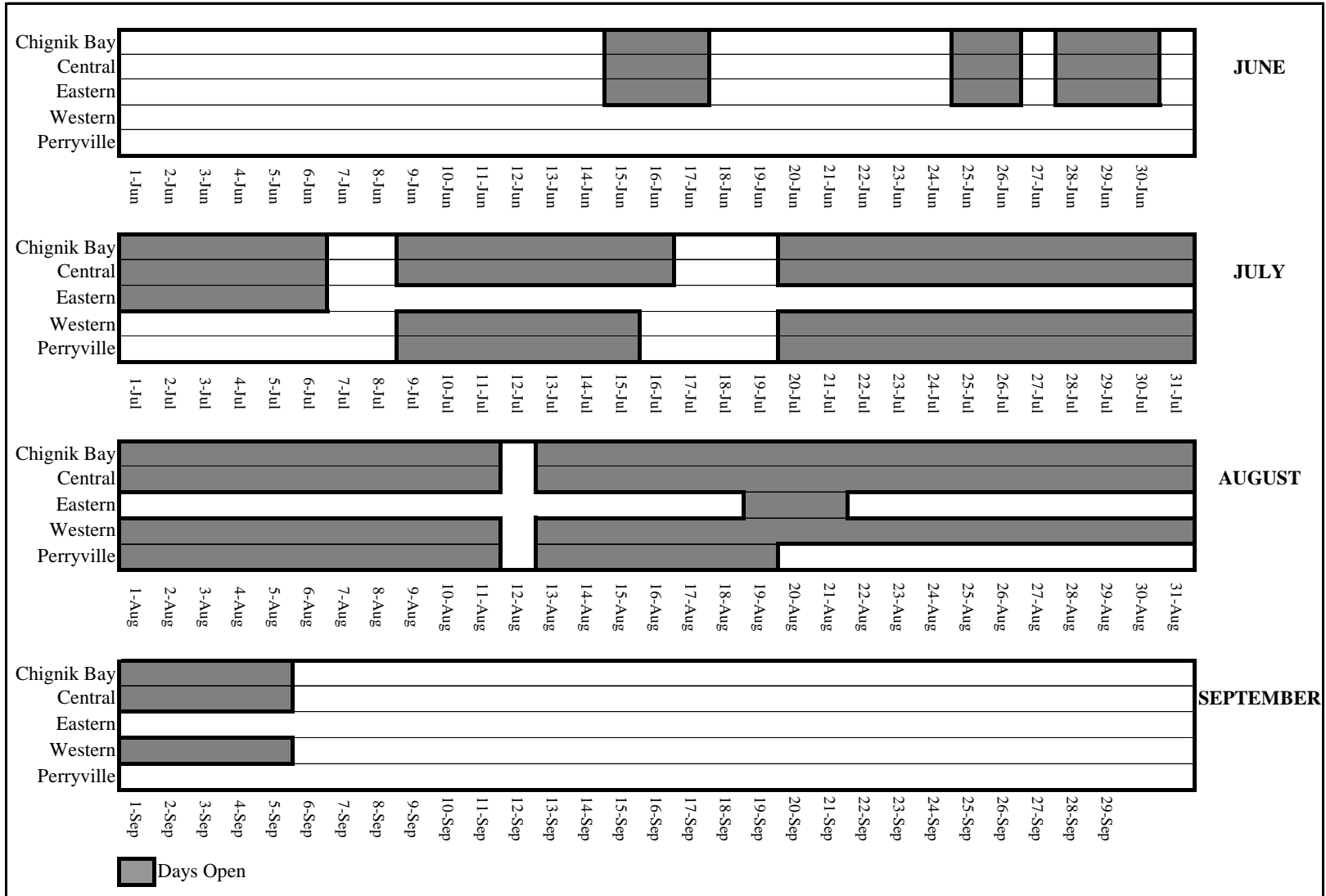


Figure 11.—Representation of days open to commercial salmon fishing, by district and month, 2007.

**APPENDIX A. COMMERCIAL SALMON FISHING EFFORT AND
HARVEST, BY DAY, IN THE CHIGNIK MANAGEMENT AREA,
2006**

Appendix A1.—Commercial salmon fishing effort and harvest (including home pack but not including the department's test fishery harvest), by day in the Chignik Management Area, 2006.

Date	Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
12-Jun							Fishery Closed							
13-Jun							Fishery Closed							
14-Jun	17	21	0	0	16,456	107,029	0	0	0	0	0	0	16,456	107,029
15-Jun	34	60	3	72	33,976	208,207	0	0	263	789	211	1,480	34,453	210,548
16-Jun	40	53	6	138	23,943	150,793	0	0	496	2,091	220	1,774	24,665	154,796
17-Jun	39	60	2	27	29,035	187,717	0	0	20	78	204	1,935	29,261	189,757
18-Jun							Fishery Closed							
19-Jun							Fishery Closed							
20-Jun							Fishery Closed							
21-Jun							Fishery Closed							
22-Jun							Fishery Closed							
23-Jun							Fishery Closed							
24-Jun							Fishery Closed							
25-Jun	42	77	16	409	52,781	334,719	0	0	3,305	9,276	423	3,214	56,525	347,618
26-Jun	44	69	33	801	37,008	235,081	4	32	412	1,208	263	2,148	37,720	239,270
27-Jun	38	54	30	790	28,624	184,748	0	0	300	907	43	349	28,997	186,794
28-Jun	40	60	20	446	35,188	230,157	0	0	925	2,427	674	5,798	36,807	238,828
29-Jun	40	62	43	999	36,062	239,161	2	24	135	409	568	4,693	36,810	245,286
30-Jun	43	77	48	1,100	43,836	291,920	0	0	313	955	800	6,583	44,997	300,558
1-Jul	15	20	0	0	5,248	33,265	0	0	0	0	0	0	5,248	33,265
2-Jul	41	59	51	1,088	26,274	174,219	8	57	626	2,645	167	1,634	27,126	179,643
3-Jul	42	57	122	3,032	20,742	132,866	0	0	164	415	265	2,316	21,293	138,629
4-Jul	40	51	129	2,935	17,167	110,082	0	0	91	265	86	789	17,473	114,071
5-Jul	41	54	136	3,314	21,767	143,183	0	0	818	1,764	328	3,064	23,049	151,325
6-Jul	40	54	136	3,217	19,513	127,500	3	19	249	907	217	2,308	20,118	133,951
7-Jul							Fishery Closed							
8-Jul	31	38	43	988	10,717	69,367	0	0	50	165	53	549	10,863	71,069
9-Jul	38	49	92	2,028	20,807	137	0	0	535	1,527	273	2,842	21,707	6,534
10-Jul	9	9	6	145	4,525	30,086	0	0	0	0	0	0	4,531	30,231
11-Jul	34	37	48	896	15,085	99,512	489	2,518	1,581	5,126	1,201	9,900	18,404	117,952
12-Jul	6	6	23	291	11,896	83,534	822	4,838	5,663	17,924	2,339	19,419	20,743	126,006
13-Jul	32	46	19	489	17,130	113,415	317	2,086	1,284	4,722	1,576	14,533	20,326	135,245

-continued-

Appendix A1.—Page 2 of 3

Date	Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
14-Jul	39	54	95	2,167	19,188	124,785	6,964	45,547	5,241	20,924	25,594	160,288	57,082	353,711
15-Jul	33	51	87	2,079	21,818	146,266	74	444	2,542	9,573	1,008	8,124	25,529	166,486
16-Jul	40	54	81	1,646	25,464	164,989	1,086	6,198	3,160	15,996	2,482	19,098	32,273	207,927
17-Jul	26	32	743	5,333	11,435	73,967	32	210	839	2,572	227	1,664	13,276	83,746
18-Jul	17	20	3	49	6,236	40,118	0	0	513	1,551	402	3,155	7,154	44,873
19-Jul	Confidential Information													
20-Jul	5	5	1	11	10,395	64,809	554	4,319	4,842	23,140	1,028	8,444	16,820	100,723
21-Jul	37	52	12	253	32,176	207,656	584	4,527	22,516	68,353	2,891	22,704	58,179	303,493
22-Jul	37	58	43	1,083	29,340	196,188	689	4,902	5,471	26,879	2,136	16,429	37,679	245,481
23-Jul	35	49	33	694	24,567	163,789	236	1,622	7,282	30,779	755	5,831	32,873	202,715
24-Jul	36	53	66	1,433	20,027	130,834	2,347	16,466	7,241	27,999	2,714	20,673	32,395	197,405
25-Jul	34	43	14	287	13,396	87,641	73	558	7,786	23,409	133	999	21,402	112,894
26-Jul	36	50	14	294	23,359	150,824	1,821	14,583	9,750	34,539	3,623	29,014	38,567	229,254
27-Jul	33	42	21	371	23,334	145,932	490	3,876	18,414	69,038	2,119	16,593	44,378	235,810
28-Jul	33	37	8	148	17,942	116,110	633	4,873	10,474	34,601	1,461	11,604	30,518	167,336
29-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30-Jul	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31-Jul	28	37	2	20	9,340	60,046	1	3	1,683	5,807	19	136	11,045	66,012
1-Aug	Fishery Closed													
2-Aug	Fishery Closed													
3-Aug	Fishery Closed													
4-Aug	Fishery Closed													
5-Aug	31	42	8	164	9,828	61,534	19	111	12,740	49,456	195	1,642	22,790	112,907
6-Aug	32	32	1	13	9,660	63,171	3,356	26,895	32,716	117,817	1,039	8,296	46,772	216,192
7-Aug	31	45	1	54	8,623	54,063	1,844	16,207	30,087	116,714	715	5,410	41,270	192,448
8-Aug	28	32	0	0	4,100	26,373	4,364	34,539	24,523	91,895	818	6,526	33,805	159,333
9-Aug	22	27	1	26	4,354	27,282	1,725	13,329	7,973	32,509	136	1,140	14,189	74,286
10-Aug	19	25	0	0	6,176	38,897	2,718	21,747	18,943	69,476	489	3,768	28,326	133,888
11-Aug	13	16	0	0	3,772	24,356	221	1,773	10,948	37,501	209	1,612	15,150	65,242
12-Aug	9	9	7	94	1,704	10,752	410	3,261	9,374	34,279	532	4,305	12,027	52,691
13-Aug	7	7	1	25	1,600	10,227	129	1,257	8,344	32,169	197	1,540	10,271	45,218
14-Aug	13	13	1	18	2,624	17,584	749	5,192	36,472	138,129	298	2,473	40,144	163,396

-continued-

Appendix A1.–Page 3 of 3.

Date	Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
15-Aug	10	10	0	0	2,458	15,437	41	277	37,679	132,587	30	197	40,208	148,498
16-Aug	12	12	2	34	3,767	23,803	381	2,903	17,470	61,021	175	1,364	21,795	89,125
17-Aug	6	6	1	10	1,984	12,487	155	1,127	1,385	5,199	15	149	3,540	18,972
18-Aug	7	7	0	0	1,124	6,963	120	858	796	2,990	9	61	2,049	10,872
19-Aug	6	6	0	0	1,913	11,860	239	1,788	1,525	5,763	11	75	3,688	19,486
20-Aug	5	5	0	0	1,174	7,407	164	1,250	580	2,201	11	80	1,929	10,938
21-Aug	6	6	1	13	1,473	9,090	170	1,209	816	3,064	11	75	2,471	13,451
22-Aug	6	6	0	0	2,641	166,616	444	3,399	1,244	4,715	28	201	4,357	174,931
23-Aug	6	6	0	0	1,585	10,191	374	2,976	808	3,107	9	58	2,776	16,332
24-Aug	9	9	0	0	1,725	10,882	706	5,553	1,174	4,601	59	483	3,664	21,519
25-Aug	8	8	1	13	1,344	8,675	504	3,997	624	2,321	9	65	2,482	15,071
26-Aug	4	4	0	0	592	3,742	214	1,644	251	701	6	44	1,063	6,131
27-Aug	5	8	1	14	2,503	15,564	952	7,764	848	2,772	21	150	4,325	26,264
28-Aug	3	3	0	0	1,120	7,175	387	3,115	396	1,169	10	68	1,913	11,527
29-Aug	5	5	0	0	2,222	13,679	1,471	11,147	874	2,512	95	820	4,662	28,158
30-Aug	Processor Closed For Season													
Total	1,518	2,060	2,255	39,551	895,932	5,818,909	39,086	291,020	383,574	1,403,428	61,630	450,686	1,382,477	8,003,594

APPENDIX B.
COMMERCIAL SALMON FISHING EFFORT AND HARVEST, BY
DAY, IN THE CHIGNIK MANAGEMENT AREA, 2007

Appendix B1.—Commercial salmon fishing effort and harvest (including home pack but not including the department’s test fishery harvest), by day in the Chignik Management Area, 2007.

Date	Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
12-Jun							Fishery Closed							
13-Jun							Fishery Closed							
14-Jun							Fishery Closed							
15-Jun	42	44	5	132	19,570	139,427	0	0	13	54	300	2,663	19,888	142,276
16-Jun	38	39	2	43	13,819	97,957	0	0	1	2	1	7	13,823	98,009
17-Jun	41	41	10	196	12,507	88,823	0	0	209	697	450	3,666	13,176	93,382
18-Jun							Fishery Closed							
19-Jun							Fishery Closed							
20-Jun							Fishery Closed							
21-Jun							Fishery Closed							
22-Jun							Fishery Closed							
23-Jun							Fishery Closed							
24-Jun							Fishery Closed							
25-Jun	38	42	9	182	21,260	145,904	1	9	191	674	274	1,881	21,735	148,650
26-Jun	44	46	23	493	23,867	169,100	0	0	1,214	4,178	2,275	19,515	27,379	193,286
27-Jun							Fishery Closed							
28-Jun	29	29	7	126	8,156	53,316	20	109	1,209	3,756	197	1,778	9,589	59,085
29-Jun	46	50	40	618	20,871	140,358	80	489	4,230	13,541	815	7,090	26,036	162,096
30-Jun	44	46	28	453	17,312	121,603	27	167	2,283	7,330	664	5,572	20,314	135,125
1-Jul	44	48	48	804	20,247	131,734	136	854	5,792	18,470	1,528	13,379	27,751	165,241
2-Jul	44	44	48	697	14,055	90,573	163	1,133	3,720	11,852	940	8,103	18,926	112,358
3-Jul	40	42	81	1,377	15,252	107,913	99	593	2,943	9,729	877	7,102	19,252	126,714
4-Jul	44	48	66	1,144	23,210	166,083	275	2,153	3,950	12,371	1,287	10,291	28,788	192,042
5-Jul	37	43	70	1,562	19,683	137,360	189	1,228	3,752	12,838	1,037	8,437	24,731	161,425
6-Jul	16	16	16	286	6,295	42,698	489	2,935	2,391	7,805	456	3,853	9,647	57,577
7-Jul							Fishery Closed							
8-Jul							Fishery Closed							
9-Jul	44	44	117	2,084	21,471	161,320	1,171	8,406	7,295	23,957	4,465	34,322	34,519	230,089
10-Jul	40	46	90	1,778	22,286	163,855	273	1,882	4,076	13,802	2,735	21,791	29,460	203,108
11-Jul	43	53	130	2,684	28,252	204,883	471	3,273	10,256	34,462	4,415	36,187	43,524	281,489
12-Jul	46	50	81	1,335	27,079	180,722	492	3,304	12,987	43,548	1,981	17,088	42,620	245,997
13-Jul	39	41	83	1,429	22,615	167,798	2,197	12,790	11,948	41,634	3,582	28,940	40,425	252,591

-continued-

Appendix B2.—Page 2 of 3.

Date	Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
14-Jul	43	48	133	2,318	41,809	270,627	1,682	11,806	20,101	68,811	2,110	17,906	65,835	371,468
15-Jul	42	52	96	1,197	33,143	216,587	1,597	11,308	13,887	49,103	2,354	20,405	51,077	298,600
16-Jul	41	44	59	783	19,577	136,507	258	1,978	4,388	15,353	496	4,470	24,778	159,091
17-Jul							Fishery Closed							
18-Jul							Fishery Closed							
19-Jul							Fishery Closed							
20-Jul	39	41	20	391	19,440	143,868	509	3,347	14,168	50,389	846	6,749	34,983	204,744
21-Jul	41	46	26	322	24,448	169,654	939	6,142	24,063	89,286	1,400	11,699	50,876	277,103
22-Jul	43	48	28	426	28,984	206,985	661	4,504	31,667	114,833	2,756	21,613	64,096	348,361
23-Jul	41	51	52	794	33,697	246,431	1,690	12,427	61,502	208,717	3,089	26,909	100,030	495,278
24-Jul	40	49	24	500	23,579	169,529	1,029	5,991	40,141	159,149	1,850	15,134	66,623	350,303
25-Jul	32	37	7	175	18,729	133,792	267	1,957	37,722	137,463	2,000	17,082	58,725	290,469
26-Jul	37	45	33	715	18,329	131,631	635	4,424	58,941	198,872	1,319	12,013	79,257	347,655
27-Jul	40	46	18	325	19,806	141,721	1,006	6,547	65,169	236,330	1,421	12,522	87,420	397,445
28-Jul	35	41	11	150	14,324	103,717	369	2,944	59,373	191,697	723	6,524	74,800	305,032
29-Jul	35	43	18	265	12,437	88,161	798	5,124	54,252	203,796	1,088	9,540	68,593	306,886
30-Jul	39	43	38	550	16,110	112,862	2,373	16,496	92,107	327,756	2,418	21,129	113,046	478,793
31-Jul	39	41	11	173	18,959	118,260	1,182	8,132	86,484	311,924	1,468	11,331	108,104	449,820
1-Aug	33	37	21	148	8,462	57,481	2,119	15,056	57,456	216,433	1,326	11,612	69,384	300,730
2-Aug	34	36	8	122	9,298	61,654	2,188	15,901	71,923	256,787	1,480	12,808	84,897	347,272
3-Aug	36	37	18	218	9,601	67,050	2,176	15,872	112,471	374,612	2,272	19,829	126,538	477,581
4-Aug	33	33	19	284	9,146	62,780	2,522	18,832	90,585	361,974	1,615	12,448	103,887	456,318
5-Aug	35	36	8	87	8,793	61,784	2,743	20,249	95,078	336,376	1,397	12,974	108,019	431,470
6-Aug	34	37	8	125	7,892	53,868	1,765	12,971	74,370	296,681	1,098	8,793	85,133	372,438
7-Aug	32	32	5	72	4,774	33,709	1,912	13,974	85,593	278,906	1,133	9,698	93,417	336,359
8-Aug	29	29	8	146	5,020	34,513	1,990	14,503	87,490	351,337	1,090	8,755	95,598	409,254
9-Aug	26	27	4	82	3,096	21,915	1,836	13,503	62,684	214,675	719	6,208	68,339	256,383
10-Aug	26	27	12	92	4,960	34,746	1,524	11,152	83,415	335,165	1,011	8,300	90,922	389,455
11-Aug	25	27	13	122	4,478	31,502	2,676	19,455	93,038	326,687	1,236	10,184	101,441	387,950
12-Aug							Fishery Closed							
13-Aug	5	5	0	0	511	3,568	4	33	1,400	5,320	17	125	1,932	9,046
14-Aug	27	28	17	272	3,674	25,132	3,982	28,685	69,721	267,693	1,572	12,055	78,966	333,837

-continued-

Appendix B3.–Page 3 of 3.

Date	Effort		Chinook		Sockeye		Coho		Pink		Chum		Total	
	Permits	Landings	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
15-Aug	24	26	61	1,266	3,531	23,686	2,878	21,795	77,159	280,508	1,388	11,114	85,017	338,369
16-Aug	26	27	0	0	4,077	26,508	2,436	17,983	72,700	294,819	1,408	10,809	80,621	350,119
17-Aug	14	14	1	6	2,065	14,178	386	3,397	11,028	45,144	274	2,068	13,754	64,793
18-Aug	10	10	1	24	2,356	16,324	328	2,633	10,749	43,379	460	3,577	13,894	65,937
19-Aug	13	13	1	17	2,525	16,900	542	4,317	15,029	61,274	384	3,015	18,481	85,523
20-Aug	15	15	0	0	2,914	19,599	1,250	9,720	43,470	167,993	1,751	12,024	49,385	209,336
21-Aug	13	13	4	49	2,163	13,700	1,481	11,582	20,408	81,643	740	5,719	24,796	112,693
22-Aug	11	11	1	20	2,438	16,128	1,207	9,543	15,162	60,484	570	4,461	19,378	90,636
23-Aug	7	8	0	0	1,790	11,725	862	8,050	6,508	26,386	554	4,264	9,714	50,425
24-Aug	10	10	2	36	3,082	20,467	1,293	11,482	6,843	27,348	318	2,331	11,538	61,664
25-Aug	9	10	4	39	2,610	17,636	2,897	23,313	11,080	44,290	570	4,622	17,161	89,900
26-Aug	4	4	0	0	1,145	7,646	166	1,318	0	0	43	294	1,354	9,258
27-Aug	6	6	2	11	2,106	13,622	660	5,434	560	2,326	88	700	3,416	22,093
28-Aug	6	6	0	0	2,258	15,280	656	5,358	1,145	4,561	89	680	4,148	25,879
29-Aug	6	6	0	0	1,500	9,829	490	4,112	258	1,032	51	394	2,299	15,367
30-Aug	7	7	0	0	1,885	12,187	797	6,824	0	0	71	507	2,753	19,518
31-Aug	6	6	0	0	2,363	15,479	1,053	9,232	0	0	35	247	3,451	24,958
1-Sep	7	7	0	0	1,730	11,001	933	7,952	0	0	24	184	2,687	19,137
2-Sep	6	6	0	0	2,191	14,133	1,126	8,996	0	0	60	335	3,377	23,464
3-Sep	6	6	0	0	2,049	12,928	1,453	11,904	0	0	55	310	3,557	25,142
4-Sep	Confidential Information													
5-Sep	4	4	0	0	998	6,466	990	8,763	0	0	14	88	2,002	15,317
Processor Closed For Season														
Total	1,933	2,095	1,746	29,745	829,110	5,769,736	73,221	543,762	2,019,748	7,388,012	78,552	648,355	3,002,377	14,379,610

APPENDIX C: FORECAST AND ACTUAL RUNS

Appendix C1.—Chignik sockeye salmon forecasts and actual runs, by run and year, 1993 through 2007.

Year	Early Run (millions)			Late Run (millions)			Total Run (millions)		
	Forecast	Actual	% Error	Forecast	Actual	% Error	Forecast	Actual	% Error
1993	1.60	1.29	19	0.95	1.53	-61	2.55	2.82	-11
1994	1.80	2.36	-31	1.30	0.61	53	3.10	2.98	4
1995	1.90	1.03	46	0.90	1.69	-88	2.80	2.72	3
1996	1.40	2.15	-54	1.60	0.99	38	3.00	3.14	-5
1997	1.00	0.63	37	1.60	0.91	43	2.60	1.55	41
1998	0.90	0.72	20	1.10	1.11	-1	2.00	1.83	8
1999	1.05	2.48	-136	1.29	1.98	-54	2.34	4.46	-91
2000	3.90	2.11	46	1.09	0.84	23	4.99	2.96	41
2001	1.00	1.31	-31	0.91	1.61	-77	1.91	2.91	-53
2002	1.03	1.07	-4	1.09	0.91	17	2.12	1.98	7
2003	1.64	0.99	40	1.19	0.99	17	2.83	1.98	30
2004	1.26	1.09	13	1.08	0.41	62	2.34	1.50	36
2005	1.84	1.46	21	0.55	0.71	-29	2.39	2.18	9
2006	1.21	0.80	34	0.28	0.94	-236	1.49	1.74	-17
2007	1.02	0.63	38	0.90	0.90	0	1.92	1.53	20
Averages									
1998-07	1.49	1.27	4	0.95	1.04	-28	2.43	2.31	-1
2003-07	1.39	0.99	29	0.80	0.79	-37	2.19	1.79	16